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ABSTRACT

The U.S. Office of Education funded the Adult Indian Education Project (AIEP) for 15 months to identify literacy levels and educational needs of adult American Indians in Oklahoma. Using Native American field interviewers, the AIEP surveyed a 1.8% random sample of adults from 19 tribal groups representing 70% of the Indian population of Oklahoma. Respondents were asked questions regarding: social background (sex, age, occupation, etc.); tribal characteristics (tribal membership, blood quantum, etc.); educational attainment; and functional literacy (occupational knowledge and consumer, health, and legal literacy). Findings indicated: almost 20% of the Indian adults were not included in the 1970 Oklahoma census of [illegible]can Indians; 36% of the respondents spoke their tribal language and 32% preferred it to English; over 51% of the Indian adults had not completed high school; the illiteracy rate exceeded 20% in all areas, going to 42% in consumer literacy and 63% in general computation skills; 56.9% of the total Oklahoma adult Indians were functionally illiterate in one or more literacy areas, and 13.9% were literate in all literacy areas; illiteracy appeared to be reduced by high school equivalence programs and by continuing, vocational/technical and adult education programs; functional literacy correlated with the higher income levels. (JC)

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Office of Indian Education
Part C

# Literacy and Education

## among Adult Indians in Oklahoma

Volume I

May 1977

U.S. DEPARTMENT OF HEALTH
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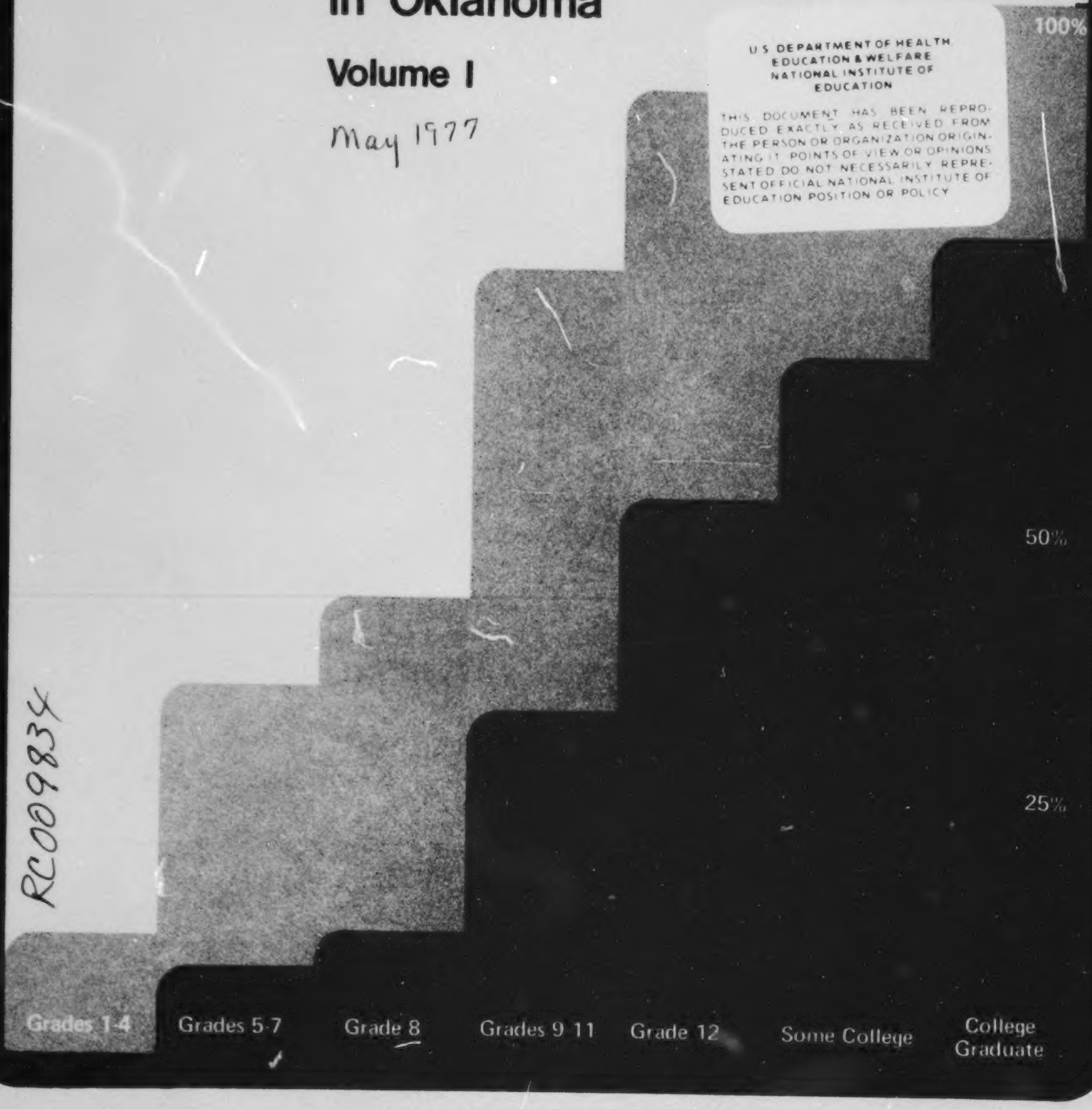

# Literacy and Education

## among Adult Indians in Oklahoma

## Volume I

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# ADULT INDIAN EDUCATION PROJECT

## FIELD INTERVIEWERS

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| Warren Allen | Creek |
| Billy Amauty | Kiowa |
| Martha Bark | Cherokee |
| Claudeen Epperson | Ottawa |
| Lyna Hanks | Choctaw |
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| Esther Jay | Miami |
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| Larry F. McGrath | Cherokee |
| Juanita McQuistion | Wyandotte |
| Karen Sue Miles | Absentee Shawnee and Sac & Fox |
| Susan Miller | Seminole |
| Darrell Murdock | Kickapoo |
| LeRoy Neddeau | Citizen Band Pottawatomi |
| Jane Northcott | Seminole |
| Hazel Palmer | Comanche |
| Richard Palmer | Cherokee |
| Elton Parton | Caddo |
| Michelle Poafpybitty | Comanche & Omaha |
| Linda Poolaw | Delaware |
| Newton Poolaw | Kiowa |
| Minnie Poole | Creek |
| Karen Pope | Choctaw |
| Annette Reeve | Cherokee |
| Janie Six | Cherokee |
| Billy Skye | Cherokee |
| Olivia Skye | Cherokee |
| L. Maggie Skye | Quapaw |
| Janice Staneart | Choctaw |
| Jerry Tahsequah | Comanche |
| Lincoln Tartsah, Sr. | Apache |
| Neoma Thomason | Choctaw |
| John Tiger | Creek & Seminole |
| Lucinda Tiger | Creek |
| Maxine Walkingstick | Cherokee |
| Mose White Eagle | Seneca-Cayuga |
| Karita Wildcat | Comanche |
| Betty Young | Cherokee |
| Linda Zientek | Creek |

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# ABSTRACT

This report is the result of a 15 month project designed to survey literacy and education among adult Indians in Oklahoma.

### What questions did the survey seek to answer?

The Adult Indian Education Project (A.I.E.P.) was funded by the U. S. Office of Education to answer two specific questions: (1) ~~What is the present level of illiteracy~~ and high school completion of adult Indians in Oklahoma? and (2) ~~What are the educational needs of adult Indians~~ in the state?

Illiteracy was surveyed based on the concept of "functional literacy." Functional literacy means reading for a purpose - reading skills which an adult possesses to participate in activities normally expected of adults within Oklahoma communities. This definition is consistent with the U. S. Office of Education's definition of a literate person:

> "one who has acquired essential skills in reading, writing and computation required for effective functioning in a society and whose attainment of such skills makes it possible for them to develop and participate actively in the way of life..."
> (Nafziger, 1975)

This definition of literacy then coupled with a traditional concept of educational attainment provided the basis for the assessment of educational needs of adult Indians in the state.

### What was the overall research design?

Prior to this survey there was a severe lack of data, in many cases, on even basic social and educational conditions of Indian adult members of the tribes in the state. As a result, the A.I.E.P. survey was required to obtain information on a broad range of social characteristics as well as literacy and educational characteristics. In order to obtain the information needed, a field survey was conducted among a random sample of the adult members of the tribes in Oklahoma. Survey questions were constructed with the assistance of Indian professionals across the state. The sample of respondents was obtained with the cooperation of tribal officials. ~~Field interviewers were trained within each tribal group~~. These field interviewers, then, contacted respondents and asked them the questions listed on the questionnaire. The responses to these questions were then analyzed by the project staff. The results of these analyses are presented in this report.

### What kinds of survey questions were asked?

The A.I.E.P. survey ~~asked Indian adults four kinds of questions.~~ The first group contained those questions that pertained to the social background of the respondents. This included ~~sex, age, marital status, place of residence~~,

~~occupation~~, ~~occupational aspirations~~, and ~~community activities and interests~~. The second group contained those questions that pertained to the tribal characteristics of the adults. This included ~~tribal membership, blood quantum~~, ~~spouse tribal membership~~, ~~sources of tribal news and tribal events~~ attended. The third group of questions concerned educational attainment. This group included ~~years of school completed~~, ~~type of school attended~~ (BIA or public), ~~type of certificate received~~ (diploma or high school equivalence), and ~~education received after high school~~.

The last group contained those questions that pertained to functional literacy outcomes. This group was further divided into four literacy areas: ~~occupational knowledge~~, ~~consumer literacy~~, ~~health literacy~~, and ~~legal literacy~~. These literacy areas were ones which had also been used in previous research at the national level pertaining to functional literacy. Specifically, occupational knowledge included tasks such as reading a classified employment ad, figuring weekly wages and completing a Social Security application. Consumer education included identifying the cost of a grocery item from a newspaper ad and computing taxes from an income tax table. Health knowledge was measured by indicating the normal body temperature, identifying foods that contained protein, identifying two signs of diabetes and interpreting insurance benefits. Lastly, legal knowledge was tested by indicating a knowledge of the meaning of equal employment opportunity, indicating knowledge of an individual's civil rights when a person is arrested and indicating the ability to interpret an apartment lease. These literacy questions were straightforward and represented a minimal level of knowledge that the Indian community deemed necessary for successful adult functioning in today's society.

What were the findings of the survey?

The A.I.E.P. surveyed a ~~1.8 percent random sample~~ of adults from ~~19 tribal groups~~ ~~representing 70 percent of the Indian population of Oklahoma~~. Some of the principal findings were:

(1) There were over 16,000 more American Indians in Oklahoma than previous estimates had indicated. ~~Almost 20 percent~~ of the Indian adults ~~were not included in~~ the count of American Indians by the ~~1970 census~~.

(2) ~~Thirty-six (36) percent~~ of the adults surveyed said they were ~~able to speak their tribal language~~ and 32 percent preferred their tribal language to English.

(3) ~~Over 51 percent~~ of the Indian adults ~~have not completed high school~~.

(4) The ~~illiteracy rate~~ among Indian adults is quite high, ~~exceeding 20 percent in all areas~~ and going as high as ~~[illegible] percent in consumer literacy~~ and ~~69 percent~~ in ~~general computation skills~~. In total, however, there were an estimated 36,000 Indian adults living in Oklahoma ~~who were functionally illiterate in one or more literacy areas~~. This represented ~~[illegible] percent~~ of the total Indian adult population. Also, only ~~13.9 percent~~ of the adults ~~were literate~~ in all literacy areas.

(5) Illiteracy seemed to be reduced, at least somewhat, by high school equivalence programs and by continuing, vocational/technical and adult education programs.

(6) Functional literacy was found to be a good "predictor" of income; that is, the higher a person's functional literacy abilities, the more likely his/her income will be higher.

What are the implications?

Results such as those above seem dramatic. Yet for those who live in these communities, many of these results coincide with everyday experience. Though somewhat more severe, they also contain patterns of illiteracy revealed by other investigators working with more limited samples of adults within different contexts. The unique feature of this study is that it documents the extent and nature of the relationships with a state sample of American Indians for the first time. It is, therefore, the first survey that enables one to gauge the full scope of the problems confronting the adult American Indian within the educational system.

The results reflect extensive educational needs among Indian adults and children across the state. These needs must be addressed through public awareness and through policy modifications and programs handled by the American Indian communities themselves but with a good measure of state and national assistance.

# CHAPTER 1

# INTRODUCTION

This chapter presents the major purposes and conceptual framework of this survey of educational attainment and functional literacy among adult Indians in the state of Oklahoma.

## 1.1 Major Purposes

On July 1, 1975 the American Indian Institute of the Southwest Center for Human Relations Studies at the University of Oklahoma entered into an agreement with the United State Office of Education, Indian Education Division, Title IV, Part C to conduct a survey of adult Indian literacy and educational attainment in the state of Oklahoma. The twelve-month award commissioned the Adult Indian Education Project of the American Indian Institute to obtain and interview a representative sample of adult Indians to assess educational needs of adults in the state. These interviews were to be scored and tabulated and the results provided to the U. S. Office of Education, Indian Education Division. Originally scheduled to finish on June 30, the Adult Indian Education Project was funded for a three-month extension by the Office of Native American Programs. The project activities were officially completed on September 30, 1976.

## 1.2 Exemplary Project

The Adult Indian Education Project was unique in that it was: (1) one of the first surveys which examined functional literacy on such a large scale, (2) one of the first intertribal surveys of this scale among American Indian tribes and (3) the first statewide survey on functional literacy among adult Indians. The primary objectives of the project involved the execution of a survey of educational attainment and functional literacy among adult Indians in the state of Oklahoma, and reporting the results of that assessment of educational needs to tribes, state and national organizations.

However, due to its uniqueness, a secondary objective of the Adult Indian Education Project was to fully document the design and activities involved in such a statewide, multi-tribal survey. By this thorough documentation of the project's activities, it is hoped that the project will serve as an exemplary project for those conducting similar educational needs assessments among American Indians and other communities, either statewide or locally.

The exemplary project documentation included as a part of this final report is cross-indexed on page vi. This documentation covers the following aspects of the Adult Indian Education Project.

1. Project Design
2. Methodology
3. Planning
4. Management of project activities
5. Field interviewer training
6. Survey instrument construction
7. Forms and records
8. Data reduction
9. Analysis and implications
10. Communications and reporting

It is hoped that through the documentation in both the narrative of this final report and the accompanying appendixes, the Adult Indian Education Project will be assisting future projects in establishing some of the basic procedures associated with this type of research and at least somewhat lessening the necessity for future projects to repeat the same efforts undertaken by this project.

## 1.3 Background of the Survey

This research was developed by the American Indian Institute in response to the 1972 Indian Education Act (Title IV). Part C of this Act provided for the support of adult Indian education projects particularly in the areas of literacy and high school equivalency training. This particular project was designed to assess the literacy and educational attainment of adult American Indians in Oklahoma in order to assist national education policy-makers in decision-making, implementation and administration of Part C programs within Oklahoma. In addition, the results provide to tribal as well as state and national leaders, a data base heretofore unavailable for Indians in Oklahoma.

### 1.31 Data and decision-making

Oklahoma contains the largest adult Indian population of any state in the nation. The exact number was difficult to determine beacuse there are no standard classifications of an individual as an Indian. Self-enumeration, tribal rolls, and blood quantum have all been used as a requirement for classification as an American Indian by various agencies of the federal government. Population information available today is scattered, incomplete and in some cases unavailable, non-existent or contradictory (Langone, 1974).

**THE LACK OF DATA ON EDUCATIONAL NEEDS HAS OBSTRUCTED ADULT INDIAN EDUCATION EFFORTS IN OKLAHOMA.**

As governmental agencies such as the Indian Education Division of the U. S. Office of Education funnel millions of dollars for various Indian affairs program, it was literally impossible to obtain the up-to-date and accurate information needed for decisions on these allocations. Information was lacking on even such basic questions as employment, average educational attainment, income, population, interests, vocational abilities and literacy levels. These observations,which were identified in the 1974 report of the National Advisory Committee on Indian Education, Title IV, are not intended as an indictment, but are provided to illustrate the need for more realistic human and natural resource data required for programs and legislative decisions particularly as they pertain to the Indian Education Act.

This problem is particularly acute within Oklahoma, as the 96,803 American Indians identified by the Bureau of Census within the state comprise the largest percentage of Indians (12.7%) of the nation's 763,000 Indians.* (U. S. Bureau of Census, Census of Population: 1970, American Indian Subject Report). In addition, this Indian population does not reside in a bounded reservation area, or for the most part, in concentrated urban areas. Rather, it is scattered rather broadly among the general rural population of the state.

As a result of this geographical distribution, data for most of the 34 tribes within this state are severely inadequate and in many cases virtually non-existent. There is no sound basis for comparison to determine the increase or decrease of given problems or indeed the improvement or lack of improvement in either literacy or educational attainment of adult Indians in Oklahoma. Further, the lack of data has had a detrimental effect on efforts to assess the educational needs of the Indian in Oklahoma and provide educational programs to address those needs. Figure 1-01 shows that while the state Indian population comprises 12.7 percent of the total national Indian population, Oklahoma received only 3.4 percent of the total $3,000,000 funded under Title IV, Part C in fiscal year 1975. Although this allocation increased in fiscal year 1976, the proportion was still considerably less than the Indian population proportion.

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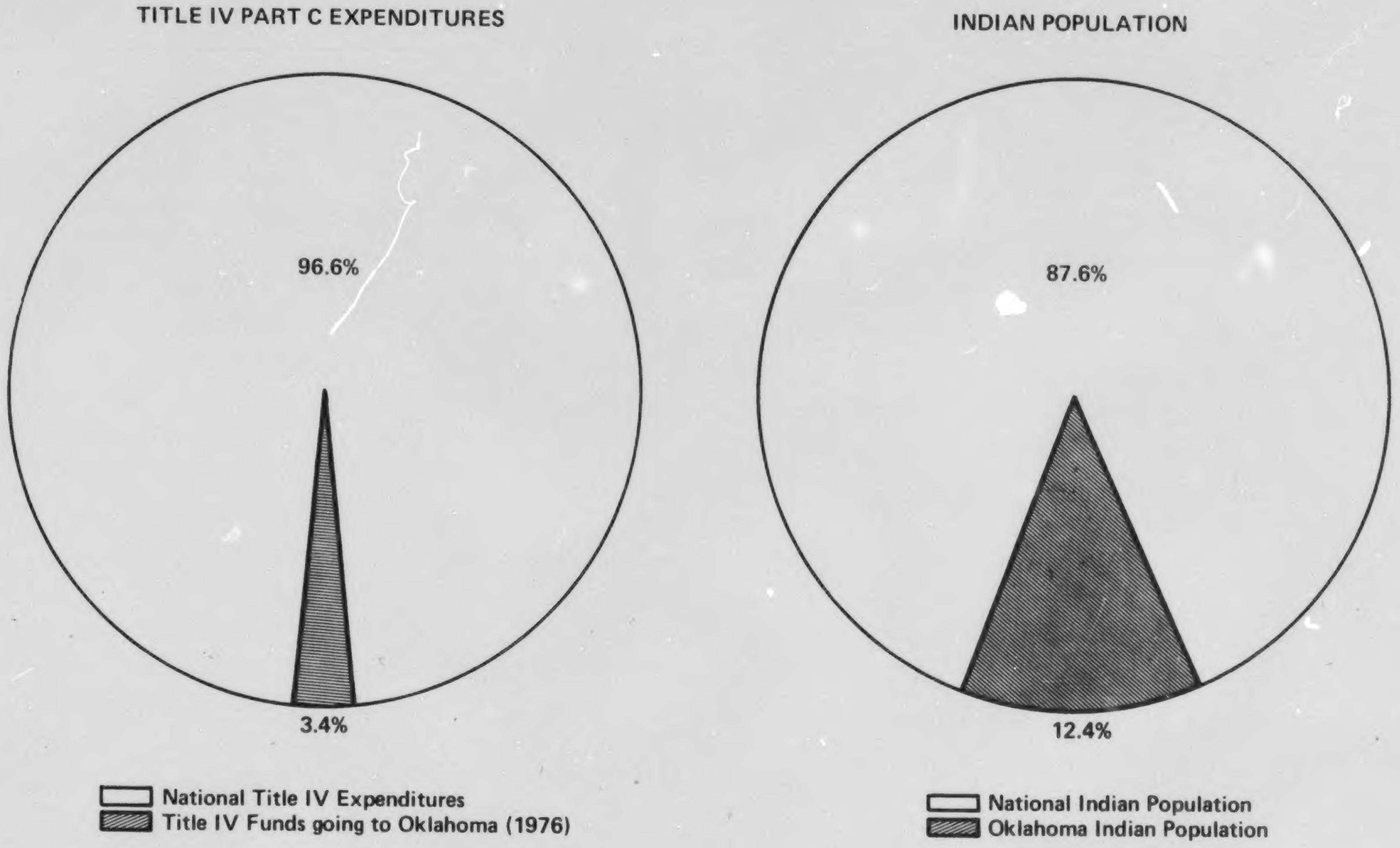
*For a detailed description of population estimates see Addendum B.

FIGURE 1-01 COMPARISON OF EXPENDITURE TO POPULATION



Title IV Funds for Oklahoma are projected to be 9.9% for 1977

HEW News, U.S. Department of
Health, Education & Welfare, Aug 12, 1974

### 1.32 Objectives

The survey had two principal objectives. The first was to provide information to the U. S. Office of Education identifying the educational conditions of adult Indians within Oklahoma. This information would contain current accurate data and analysis essential for the review and assessment of educational programs presently available to adult Indians in the state. In accomplishing this objective, information was provided specifically for:

A. Identification of education needs of adult Indian education as they exist in Oklahoma.
B. Identification and description of literacy and educational attainment of adult Indians in Oklahoma.

The second objective of the survey was to provide information which would assist educational, legislative and tribal decision-makers as they determine goals and purposes of programs for adult Indians in Oklahoma. To accomplish this objective, information was provided specifically for:

A. Identification and description of personal, social, tribal and employment characteristics of adult Indians in Oklahoma.
B. Analysis of personal, social and employment characteristics associated with educational attainment and functional literacy among adult Indians in Oklahoma.
C. Assessment of educational conditions and factors associated with those conditions as they relate to implications for program modification and development designed to address the educational needs of the adult Indian in Oklahoma.

### 1.33 The Survey

A statewide survey was the basic method for gathering the information called for by the project objectives. For this survey the Adult Indian Education Project (A.I.E.P.) was charged with the task of systematically assessing literacy in a manner consistent with the educational goals of the adult Indian community. After completing a major review of the current literature and studies on literacy, the traditional term 'literacy' was replaced by a more appropriate term 'functional literacy.' A questionnaire or instrument, then, was constructed to assess educational attainment, utilizing traditional measures; the extent of literacy, utilizing measures based on the concept of functional literacy.

The survey consisted of interviewing adult members of Indian tribes residing within the state of Oklahoma. The persons interviewed were chosen at random from tribal membership lists in proportion to the size of the population of the tribe. Approximately two percent (1.8) of the Indians statewide, from participating tribes, were interviewed for inferences about the level of adult Indian literacy and educational attainment in the state of Oklahoma.

## 1.4 Conceptual Framework

Field research such as the Adult Indian Education Project must be designed according to the constraints and conditions found in the community which was being researched. This is especially true when the community being researched and the sponsor supporting the research maintain separate cultural traditions and values. The Adult Indian Education Project made a particular effort to design a conceptual framework for the execution of the project's objectives which were appropriate to the goals of the adult Indian community within Oklahoma.

### 1.41 Field Research in Communities

The American Indian Institute in conducting research among the Indian community is guided by the following ethical concerns:

1. Research conducted should not be harmful to the people or the community involved either by intent or because of the effect of the research design.
2. Research should be consistent with the goals of the community as well as the sponsor.
3. When possible, research should be conducted with the full consent of the persons who are the subjects of the research. Steps should be taken to assure the strict anonymity and privacy of respondents participating in the research.
4. The community should be involved as fully as possible in both setting the parameters for the research design and implementing the actual research activities.
5. All research results should be turned over to the community for their information and use. If several communities are involved, information which might be identified with a particular community should not be released without the consent of the community involved.

In addition to these general ethical concerns, three assumptions formed the basis of the field study conducted by the Adult Indian Education Project.

1. Adult American Indians have the right to extension of their cultural traditions.
2. The educational institutions serving their needs must give full consideration to the fact that American Indians maintain traditions different from those of the majority culture.
3. Adult American Indians have the right to quality education and it is they who define quality.

These underlying concerns and assumptions have resulted in this project being shaped in all its phases according to the perspectives of the participating tribal communities within the state.

**THE A.I.E.P. SURVEY WAS, IN LARGE PART, DESIGNED AND CONDUCTED BY MEMBERS OF THE INDIAN COMMUNITIES ACROSS THE STATE.**

The educational goals and objectives for which this survey was conducted were ones expressed by the Indian community. The specific questionnaire used in the survey was designed with the fullest advice from both Indian professionals and representative tribal members. The data collection itself was done by tribal members within their own tribal groups. Respondents who participated in the survey were informed as to the purposes of the project. Finally, ~~the results of this research were reported directly to the tribal communities involved.~~

### 1.42 Definition of Literacy

The concept of literacy, as a major part of the foundation of this survey, had to be defined in terms that were meaningful to the Indian community in Oklahoma. Both traditional definitions and definitions which were not so traditional were reviewed for their appropriateness for this community.

Literacy is traditionally associated with reading activities, yet there are differences between the concepts of reading and literacy. Literacy, in contrast to reading, implies both basic reading skills and socially appropriate behavior, and any definition of literacy must incorporate both. Bormuth offers the following definition:

> "In the broadest sense of the word, literacy is the ability to exhibit all the behavior a person needs in order to respond appropriately to all possible reading tasks." (1970: 134-146)

If literacy was to be a realistic goal of an adult education program, it had to be devised by some subset of the total set of both reading tasks and behavior required to accomplish those tasks. Bormuth suggested that this subset be selected on the basis of economic, social, cultural and political benefits to the individual in society. In effect, he was saying that literacy should be measured more for its social utility rather than for some assumed abstract value.

Traditional measures. The multifaceted nature of literacy can historically be seen through the use of three measurement techniques: grade level equivalence, standard scores on normed referenced tests and composite scores. Each of these in some way relates a particular performance on some reading test to the performance of others at a particular level. One might say, "John is reading at grade level 7.2." Recently the National Center for Health Statistics conducted a survey using their brief tests of literacy. This survey shows that 4.8 percent of the individuals 12-17 years old scored below the average of fourth-grade readers on the instrument and can therefore be regarded as illiterate (Literacy

Among Youths 12-16 Years, U.S., 1973). These methods of assessment were not particularly useful because it was uncertain what specific performances were implied by success on the test. Further, the data was based on abstract measures and norms which were not related to any social or cultural conditions within which actual reading takes place.

The self-report method of measuring literacy has recently been used by the 1970 census. By this method, a person who reports that they have completed at least six grades of school is asked whether they can read a "simple message." This method raises three critical concerns. First, the description of "simple message" may not be adequate; second, there is uncertainty about the relationship of literacy to graduating from the sixth grade; and third, the unwillingness of people to report themselves as illiterate casts considerable doubt on the Census Bureau's methods of estimating literacy. Measures of literacy such as those discussed above may be useful at the first-guess level. However, they have proven inadequate because they did not relate directly to actual reading behavior nor did they permit inferences about what source of competencies were required for the skills being measured.

**FUNCTIONAL LITERACY: READING FOR A PURPOSE—READING SKILLS WHICH AN ADULT MUST HAVE IN ORDER TO FUNCTION MINIMALLY WITHIN DAILY AMERICAN SOCIETY.**

**THIS IS TESTED BY READING ITEMS SUCH AS A NEWSPAPER, A SIGN IN A STORE OR A JOB APPLICATION—DAY-TO-DAY SIMPLE READING ITEMS.**

Functional literacy. The term functional literacy denotes reading for a purpose. The purpose is related to socio-utility. Gray, 1969, defined functional literacy "as the ability to engage productively in all reading activities normally expected of a literate adult in communities." This definition, while circular, emphasized the fact that certain tasks are expected of adult members by their community. The U. S. Office of Education defined a literate person as:

> "one who has acquired essential skills in reading, writing and computation required for the effective functioning in a society and whose attainment of such skills make it possible for them to develop and participate actively in the way of life in time." (Nafziger, 1975)

The U. S. Office of Education operationalized this definition by suggesting that adults must be able to perform the following tasks:

1. Read and understand all sections of the newspaper with particular emphasis on classified advertisement sections.
2. Read driver's placement test from any state.
3. Read and understand voter's registration instructions.
4. Read and comprehend the key features of popular business contracts such as those issued by car dealers, furniture stores, clothing stores and repair dealers.
5. Read labels on such household items as groceries, medicine, recipes, machine-operating instructions, etc.
6. Read the material necessary to perform jobs classified as entry level.
7. Read personal letters.
8. Read and follow instructions such as road and building signs.
9. Read and use the telephone directory.
10. Read and complete job application forms.
11. Read and comprehend business letters to debtors and creditors.

From these definitions and operationalizations of the concept of functional literacy, one can view some of the major problems related to constructing a survey instrument which adequately assesses the ability to complete such tasks. The increasing emphasis on adult literacy has led to a proliferation of reading programs and adult education programs designed to teach reading tasks important to social survival. The desire

Project (1975) conducted an intensive literature survey. In this survey he contacted governmental agencies and foundations to gain assistance in determining the characteristics of successful and unsuccessful adults. In addition, the Adult Performance Level (APL) Project interviewed adults who were under-educated and under-employed, employers and personnel specialists. The necessary skills identified during the 1975 research were grouped into the following four areas:

A. Communications skills
B. Computation skills
C. Probability skills
D. Interpersonal skills

The APL research substituted the term functional competency for functional literacy because the skills required more than just the ability to use and comprehend written materials. Five general knowledge areas were identified.

A. Occupational knowledge
B. Consumer economics
C. Community resources
D. Government and Law
E. Health

Using national samples, the APL project determined that as many as 20 percent of the adult population were functionally incompetent. In one of the skill areas, computation, it appeared that one-third of the United States adults may be functionally incompetent. Further, the illiteracy rate the APL research reported was much higher among minorities. (Northcutt, 1975) It seemed that this was related to the higher illiteracy rates reported for low-income and low-education groups. Prior to the Adult Indian Education Project, no research existed assessing adult Indian literacy by state or tribal group.

In summary of the previous research on functional literacy, it would appear that as the tasks used in literacy assessment instruments become more like actual daily tasks, in the sense of requiring composite skills, estimates of the extent of illiteracy increase proportionately. This was as expected. Results suggested that the more marginal the person's skills, the more likely he was to fail at tasks requiring several interdependent skills.

### 1.43 Questions for the Survey

The questions used in the Adult Indian Education Project's survey to measure functional literacy among adult Indians in the state of Oklahoma were constructed with the assistance of a review panel. This panel, composed of Indian professionals from across the state, selected from a pool of example literacy objectives the appropriate objectives for American Indians in their daily activities. In addition to the functional literacy measures, questions were constructed to survey educational attainment using more traditional measures such as years of school completed.

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**A.I.E.P. SURVEYED:**

- **EDUCATIONAL ATTAINMENT**
- **FUNCTIONAL LITERACY**
- **SOCIAL CHARACTERISTICS (including personal, tribal and employment characteristics)**

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Questions were also constructed to determine the personal, social, tribal and employment characteristics of the population being studied.

### 1.44 Survey Execution

Each of the tribes across the state was contacted for participation in the study. A random sample of tribal members was taken from the tribal membership lists of the 19 participating tribes. Field interviewers from within each tribal group were identified and trained in techniques of field interviewing. These field interviewers then conducted interviews among members of their tribe. The interviews were scored and tabulated and the results of the survey were analyzed by the Project staff. These survey results then serve as the basis for this report on the educational needs of adult Indians in Oklahoma.

## CHAPTER 2

## METHODOLOGY

This chapter will review the principal issues associated with the methodology utilized during the survey of educational attainment and functional literacy among adult Indians in the state of Oklahoma. These issues include population and samples, selection and training of field interviewers, instrument development, data collection and data processing.

### 2.1 Population and Samples

One of the first methodological concerns of any survey is the identification of the population group to be surveyed. A definition of who is to be included in the group must be chosen. Then, using this definition, actual names and addresses of people to be surveyed must be obtained. For this survey the three best known definitions were considered for possible use in defining which Indians would be included in the survey.

### 2.11 Definition of Population

This project was funded to assess the educational conditions of adult American Indians in the state of Oklahoma, 18 years or older. However, there were several conflicting procedures for defining exactly who is to be considered an American Indian.

**DEFINING THE INDIAN POPULATION**

- **BUREAU OF CENSUS**
  Self-enumeration
- **BUREAU OF INDIAN AFFAIRS**
  ¼ Indian Blood
  Documented Indian Ancestry
- **ADULT INDIAN EDUCATION PROJECT**
  Tribal Membership

p.16 blank

Previous definitions. The Bureau of Census in 1970 used the measure of self-enumeration; a person was considered to be a Native American if he reported himself as such when completing the census-form or when contacted by a census person. The Bureau of Indian Affairs considers a person an American Indian when having 1/4 or more Indian blood quantum from a single tribe and able to identify his/her Indian lineage. Table 2-01 shows the Bureau of Indian Affairs estimated state Indian population. Population estimates are discussed in detail in Addendum B. Finally, there was the definition utilized by the tribes which, in actuality, is several definitions. Most tribes function as separate communities separately from one another. Each has its own identifying procedure, which, in some cases, conflicts with the Bureau of Indian Affairs.

Tribal definition. When conducting community research, it is particularly important to be sensitive to a community's self-definition. This is especially true when the definition is being used as the basis for research that will eventually be utilized by the community itself in an attempt to serve its people. Consequently: it was this tribal definition of the Indian population which was used for the Adult Indian Education Project (A.I.E.P.) Survey.

As a part of this self-definition process, the Indian tribes located in the state of Oklahoma were allowed to further specify their community population to include residents within what is called the tribal service area. This resulted in two tribes specifying their community members to include only tribal members residing in a six or ten-county area serviced by the tribe. Further, the tribes of the northeastern portion of the state defined their population as being within a thirty-mile radius of the tribal office, which excluded some tribal members living in the state at a distance further than thirty miles but included an approximately equal number of tribal members residing in Kansas or Missouri.

Sources: Resident Indian Population, Labor Force, Unemployment, and Underemployment: Summary by Area: March 1972. U. S. Department of the Interior, Bureau of Indian Affairs, Statistics Division: July 1972.

* Breakdown provided by Annual Labor Force Report, Anadarko Agency: Bureau of Indian Affairs. Anadarko, Oklahoma, April, 1975.

## TABLE 2-01

## ESTIMATED INDIAN POPULATION IN OKLAHOMA BY BUREAU OF INDIAN AFFAIRS AREA OFFICE, AGENCY AND TRIBE

| Area Office<br>Agency<br>Tribe | Total Tribal Population All Ages |
|---|---|
| ANADARKO AREA | |
| Anadarko Agency | 14,043* |
| Kiowa | 5,125 |
| Comanche | 4,950 |
| Apache | 1,000 |
| Fort Sill Apache | 300 |
| Wichita | 580 |
| Caddo | 1,288 |
| Delaware (Western) | 800 |
| Concho Agency | |
| Cheyenne & Arapaho | 4,200 |
| Pawnee Agency | |
| Kaw, Otoe & Missouria, Pawnee, Ponca and Tonkawa | 3,413 |
| Shawnee Agency | |
| Iowa | 133 |
| Kickapoo | 570 |
| Potawatomi | 1,371 |
| Sac & Fox | 935 |
| Shawnee (Absentee) | 807 |
| Other Indians, tribe not specified | 1,378 |
| MUSKOGEE AREA | |
| Ardmore Agency | |
| Chickasaw | 5,850 |
| Miami Agency | |
| Eastern Shawnee, Miami, Quapaw, Seneca-Cayuga, Peoria, Ottawa, Delaware, Wyandotte | 1,930 |
| Okmulgee Agency | |
| Creek | 15,177 |
| Osage Agency | |
| Osage | |
| Tahlequah Agency | |
| Cherokee, Cherokee-Shawnee, Keetoowah, Delaware (Eastern) | 21,414 |
| Talihina Agency | |
| Choctaw | 10,849 |
| Wewoka Agency | |
| Seminole | 3,115 |
| Total | 99,228 |

## 2.12 Sampling Procedures

By using a probability or random sample, researchers are able to survey a relatively small number of people and yet speak with a certain amount of statistical accuracy about the larger group as a whole.

Sample frame. A sample is a small part of a larger item. In research, sampling means that only part of the people in the group being surveyed are actually interviewed. For example, one out of every ten people might be interviewed. The larger total group (in this case the Oklahoma adult Indian population) is called the sample frame. The people actually contacted to be interviewed are called the sample. A "random" sample is a sample chosen so that every person in the larger group being surveyed has an equal chance to be chosen for an interview.

Steps have to be taken to insure that the source list of names provided to the researchers actually include everyone in the population. For example, if the source list of names used contains only the names of the head of the household, any survey results would not be results for the total population. Instead, they would be results for only the heads of households. Thus, the characteristics of the sample frame and the methods adopted to correct deficiencies in its completeness are matters of fundamental importance. Weaknesses in a frame may pass unnoticed and affect research results unless an explicit effort is made to locate and correct them.

The sample frame selected for this project consisted of the actual list of adult Indians on recognized tribal rolls or tribal adult membership lists, for the tribes in the state of Oklahoma. A perfect sample frame would contain a complete list of all the adult Indians in the tribal population to be sampled. There would be no duplications and every adult would be included.

Initial sample. After permission was obtained from the participating tribes to sample the tribal membership list, the specific list containing the most recent and complete listing of adult tribal members and their addresses was identified. The source list figures for each of the tribes surveyed is shown in Table 2-02.

A ten percent random sample of adult tribal members was then drawn from the source list and this comprised the initial sample for the tribe. For tribes whose source list consisted of households rather than individuals, the sample frame figure included the average 1.8 adult Indian persons per household. As indicated in Table 2-02, the total sample frame for the participating tribes was 48,996.

Household sampling procedures. The sampling source list of several of the tribes consisted of household census lists or mailing lists, both of which provided the name of only one respondent within a household. In order to insure that the survey assessed the total tribal population, rather than just the heads of households, each adult American Indian within a household had to be given an equal opportunity to be considered as respondents for this survey. This was accomplished by teaching field interviewers from these particular tribes how to select a respondent from within a household by using random sampling procedures described in Appendix 3-3. In this way each eligible adult had an equal opportunity to be interviewed.

## TABLE 2-02

## OKLAHOMA ADULT TRIBAL POPULATION
## DEFINITIONS OF THE SAMPLE AND SAMPLE FRAME

| Tribe | Source | From the Source | In the Frame N | In the Frame % | Initial Sample | In the Net Sample N | In the Net Sample % | Proportion of Sample to Frame |
|---|---|---|---|---|---|---|---|---|
| Kiowa | 5 | 2,980 | 2,980 | 5.9 | 297 | 128 | 14.5 | 4.4 |
| Comanche | 4 | 1,570 H | 2,826 | 5.8 | 157 | 82 | 9.3 | 2.9 |
| Apache | 7 | 262 | 262 | .5 | 27 | 11 | 1.2 | 4.2 |
| Caddo | 4 | 330 H | 594 | 1.2 | 34 | 11 | 1.2 | 1.9 |
| Western Delaware | 4 | 237 H | 427 | .9 | 24 | 13 | 1.5 | 3.0 |
| Potawatomi | 5 | 1,770 | 1,770 | 3.6 | 177 | 38 | 4.3 | 2.1 |
| Kickapoo | 5 | 258 | 258 | .5 | 33 | 15 | 1.7 | 5.8 |
| Absentee Shawnee | 4 | 329 | 329 | .7 | 327 | 42 | 4.7 | 12.8 |
| Cherokee | 2 | 14,190 | 14,190 | 29.0 | 1,419 | 225 | 25.5 | 1.6 |
| Creek | 3+ | 711*H | 12,798 | 26.1 | 232 | 64 | 7.2 | .5 |
| Choctaw | 4 | 3,430*H | 6,174 | 12.6 | 349 | 112 | 12.7 | 1.8 |
| Eastern Shawnee | 7 | 370+H | 666 | 1.4 | 37 | 17 | 1.9 | 2.6 |
| Miami | 1 | 460* | 460 | .9 | 46 | 18 | 2.0 | 3.9 |

| Tribe | Source | From the Source | In the Frame N | In the Frame % | Initial Sample | In the Net Sample N | In the Net Sample % | Proportion of Sample to Frame |
|---|---|---|---|---|---|---|---|---|
| Peoria | 6 | 320* | 320 | .7 | 32 | 4 | .5 | 1.3 |
| Quapaw | 7 | 420* | 420 | .9 | 42 | 27 | 3.1 | 6.4 |
| Wyandotte | 1 | 450*H | 810 | 1.7 | 45 | 7 | .8 | .9 |
| Seneca-Cayuga | 7 | 90*H | 162 | .3 | 90 | 10 | 1.1 | 6.2 |
| Ottawa | 4 | 150* | 150 | .3 | 26 | 11 | 1.2 | 7.3 |
| Seminole | 8 | 3,490 | 3,490 | 7.1 | 335 | 36 | 4.1 | 1.0 |
| Other Tribal Affiliations | | | | | | 14 | 1.6 | - |
| TOTAL | | 31,817 | 48,996 | 100.0 | | 885 | 100.0 | 1.8 |

From the Source -
In State or In Service Area Adult Population
In the Frame -
Adjusted to the Average Number of Eligibles for the Tribes Without Household List
Initial Sample -
Approximately 10% of the source except Creek 33% (of 10%), Seneca-Cayuga and Absentee Shawnee 100%

+ The Source was itself a 10% Sample

* In Service Area

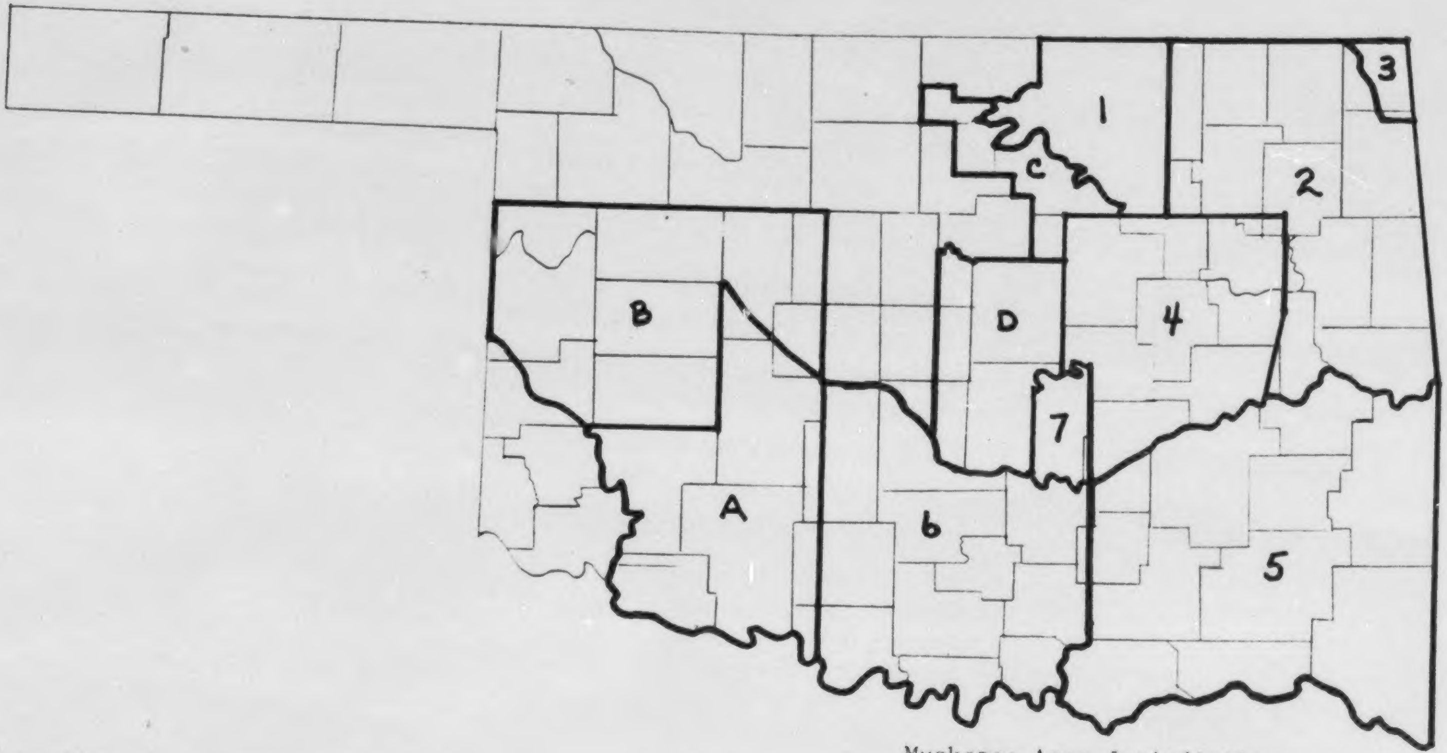
H Households

Source:

1. Tribal Roll
2. Voter's Registration
3. Census Survey
4. Mailing List (Household)
5. Per Capita Membership List
6. Judgment Fund Roll
7. Membership List
8. Membership Applications

FIGURE 2-03

BUREAU OF INDIAN AFFAIRS GEOGRAPHIC
REGIONS AND AGENCIES - OKLAHOMA



Anadarko Area Jurisdiction
  A. Anadarko Agency
  B. Concho Agency
  C. Pawnee Agency
  D. Shawnee Agency

Muskogee Area Jurisdiction
  1. Osage Agency
  2. Tahlequah Agency
  3. Miami Agency
  4. Okmulgee Agency
  5. Talihina Agency
  6. Ardmore Agency
  7. Wewoka Agency

Tribal "chunk" selection. The state of Oklahoma is divided geographically by the Bureau of Indian Affairs into two area regions. Within each of these regions, Bureau of Indian Affairs agencies have been established to assist and monitor Indian tribal groups within the state (see Figure 2-03). The sample frame, and consequently, the initial ten percent sample, involved tribal populations that were generally concentrated in geographical areas cooresponding to these agency regions.

The initial sample was divided into lists, or "chunks," each containing the names and addresses of eight individuals. The eight individuals generally lived in close geographical proximity to one another, often in the same town or rural area. These "chunks" were then distributed to field interviewers. By contacting respondents listed in the same geographical area, field interviewers avoided duplication of travel over the same territory. At the same time, however, a fairly random distribution of the sample was maintained.

## 2.2 Instrument Development

An outline of the instrument development process is provided in Figure 2-04.

### 2.21 Overview of Measures

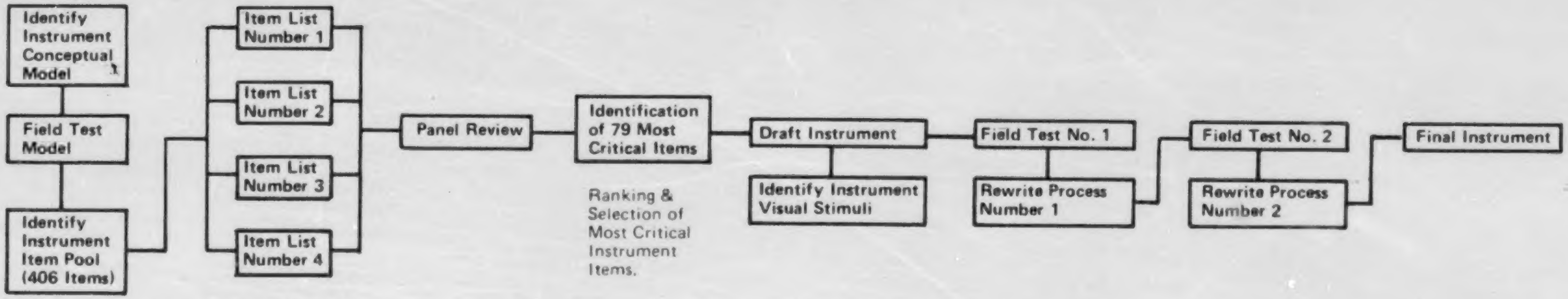
The instrument used in the A.I.E.P. Survey was designed to measure both the educational attainment and functional literacy. Educational attainment was evaluated in terms of traditional attainment measures. Principally, these were: number of years of school completed; extent of high school completion; and type and extent of post-secondary education. In determining current functional literacy levels for adult Indians far less traditional measures had to be devised.

As discussed in Section 1.22, the measurement of functional literacy required the identification of specific literacy indicators which measured types of tasks ordinarily performed by adults in their daily lives. The process of identifying these indicators is described below in Section 2.22.

In addition to educational attainment and functional literacy measures, measures were developed to assess more general personal, social, tribal and employment characteristics to help determine what other factors were associated with educational characteristics. (See Section 2.23)

The various measures of the A.I.E.P. instrument were developed to provide, not only a descriptive assessment of the educational needs of adult Indians, but also more detailed information on the characteristics of individuals who have the highest need. This in turn was intended to provide information necessary for any specific program modifications or program development addressing these needs. Further, in many cases the literacy, educational and other measures provided data which contributed significantly to an otherwise inadequate data base concerning the adult Indian population in the state of Oklahoma.

FIGURE 2-04 RESEARCH INSTRUMENT DEVELOPMENT



Ranking & Selection of Most Critical Instrument Items.

Division of Item Pool into 4 Multi-Topic Lists.

Adult Indian Education Project
Norman, Oklahoma 1976

## 2.22 Literacy Indicator Selection

Initial background research. A major task in the development of the instrument utilized for the survey was to systematically define and operationalize the term functional literacy and identify specific literacy indicators or questions. Background information was gathered in three ways.

First, the Nafziger report, 1975, was used as a primary source for the identification of tests and questionnaires which could be potentially useful. In addition, a literature search was conducted via Educational Resources Information Clearinghouse (ERIC) to identify tests, test reference books and articles on current testing efforts in field surveys. A summary of the materials identified during this literature review is contained in Appendix 8.

Second, requests for information were mailed to publishers of adult literacy materials, to principal investigators of adult literacy projects and to professionals active in adult education. All known publishers and investigators of adult literacy were contacted and asked for examination copies of materials pertaining to measuring adult Indian literacy for possible adoption during the project period.

Third, telephone and personal contact was made with individuals active in teaching and measuring adult reading. Those contacted included developers of measurement instruments, coordinators of adult Indian education programs, teachers of adults and specialists in reading measurement. These contacts helped: (1) identify test instruments, (2) gain more information about tests already identified, (3) obtain information about criteria to be used in evaluating tests, and finally (4) identify issues related to interviewing dynamics among ethnic minorities.

Item pool. Through the information obtained during the background research, it was determined that none of the instruments available at that time was well suited for use by community field interviewers among a diverse state wide adult Indian population. However, a pool of just over 400 literacy tasks measuring a range of daily activities and skills was identified. This pool of literacy items was then submitted to a review panel for identification of the literacy indicators which were to be utilized in the survey.

Panel review process. The large item pool initially identified in the survey of literacy instruments was divided into four lists of approximately 100 potential literacy tasks. These lists of literacy tasks were distributed among a review panel of American Indian professionals in the state of Oklahoma representing a wide spectrum of expertise, experience and interests. Representatives of Indian industry, adult Indian education, government, journalism, community health, law, and both tribal and intertribal service agencies were included.

**A REVIEW PANEL OF INDIAN PROFESSIONALS FROM ACROSS THE STATE SELECTED THE LITERACY QUESTIONS WHICH WOULD BE MOST BENEFICIAL TO ADULTS.**

Each panel member was given one of the four lists of literacy tasks and asked to evaluate the tasks on the basis of their relevance to adult Indian people in the state of Oklahoma. This orientation of the panelists emphasized that each panel member was serving as spokesperson for the people within a particular Indian community. They were to make judgments based on the values of that community, not merely their own.

Indicator selection criteria. A primary objective of the instrument development was to develop reading indicators that would reflect as validly and reliably as possible the characteristics of reading tasks adult Indians generally encounter in real life. In specifying a reading task, effort was focused on "basic skills" and general knowledge areas which were expected to discriminate adults who could function independently in society at a minimal level from those who could not. The constraints were that the tasks: (1) reflect frequently encountered visual stimuli and reading demands for adult Indians, (2) be usable for both evaluative and diagnostic purposes and each have, if possible, a set level of difficulty, (3) be ones which if performed would be beneficial to individuals in their daily lives, (4) be primarily based on visual rather than writing skills, and (5) be observable and scorable in an interview situation.

Reading tasks were classified according to general knowledge areas, describing the kind of daily situations in which the reading tasks would be found. These classifications were: occupational knowledge, consumer education, law and government, and health.

Initial instrument. Seventy-nine tasks out of the larger 406 item pool had a mean value of 2.5 or less on a scale of 1 to 7 (1 = beneficial; 7 = not beneficial) as determined from the responses by the 72 member review panel. (See Appendix 2-2.) These tasks were then reviewed by the project staff and an instrument of indicator questions was constructed for these tasks.

The questions were not subject to some of the usual constraints of conventional tests. The instrument did not have to be designed in a format for group administration since interviewing was to be done on a one-to-one basis. Also, it was not necessary to design questions in a multiple choice format with distractors for options. Both multiple choice and open-ended questions were utilized. The questions were constructed to:

1. be representative of the skill and topic area evaluated by the review panel as most beneficial to the adult Indian community, and if possible, be closely related to indicators which had appeared on earlier literacy surveys so as to provide comparative data for the analysis of survey results;
2. use a common and easily recognizable visual stimulus;

3. not duplicate one another;
4. be brief in the number of total visual stimuli used (i.e., questions should cluster around as few visual stimuli as possible) and
5. measure a range of difficulty levels rather than all measure the same level.

The initial questionnaire developed included 47 literacy indicator questions. In addition 12 questions from an example job application were included to examine a variety of social and educational characteristics of the respondent. The literacy questions referred to visual stimuli (e.g., newspaper ads, social security forms, signs containing health advice) which were placed on cards and read by respondents as the corresponding questions were asked.

### 2.23 Field Test and Final Instrument

As part of the first two field training programs, the interviewer trainees at these programs were asked to review this initial survey instrument and evaluate it in terms of whether (1) they would feel comfortable conducting an interview utilizing this instrument; (2) American Indian respondents would willingly cooperate and not be offended by the instrument questions; (3) the interview could be conducted in a reasonable amount of time without inconveniencing either the interviewer or the respondent; and (4) the questions as worded and the visual stimuli as presented were appropriate to Native Americans.

---

**THE A.I.E.P. QUESTIONNAIRE CONTAINED:**

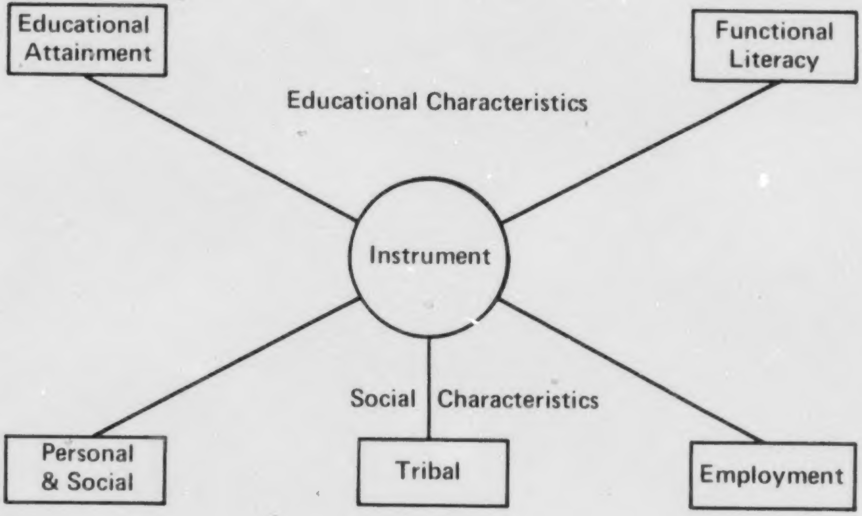
**29 Literacy Questions**
**8 Education Questions**
**19 Other Questions**

**It took about 35 minutes to answer**

---

On the basis of this field review, the initial instrument with 59 literacy indicators was consolidated and revised to an instrument with 29 literacy indicators assessing about the same literacy performance skills. As part of this revision, for example, the social indicators were revised to be asked individually and were not associated with an example job application. Some of the revisions made were due to inappropriateness or intrusiveness of the question as originally worded. However, most of the revisions made were due to a need to consolidate the questionnaire into a more manageable length and to a more smoothly flowing format. The final instrument was designed to take approximately 30 minutes to administer. The questionnaire was designed in a case-study format; that is, the questions were asked from the point of view of a typical Native American family, Joe and Ellen Bigcrow.

FIGURE 2-05
COMPONENTS OF THE SURVEY INSTRUMENT



The components of the final survey instrument are outlined in Figure 2-05.

The personal and social characteristics included:

a. Sex
b. Age
c. Marital status
d. Reported on the 1970 census?
e. Community and organizational involvements
f. Interests and hobbies

The tribal characteristics included:

a. Tribal affiliation
b. Tribal language
c. Language preference
d. Blood quantum
e. Spouse was American Indian?
f. Spouse tribal affiliation
g. Spouse blood quantum
h. Source of news about tribal events
i. Tribal events involved in

The employment characteristics included:

a. Present occupation
b. Occupational aspirations
c. Number of jobs held in past 10 years
d. Occupation made full use of training?
e. Income

Educational attainment indicators included:

a. Years of school completed
b. Type of certificate received
c. Type of school attended (BIA or Public)
d. Years of college completed
e. Degree received
f. Other vocational/continuing education?
g. Names and types of training
h. Agency providing training

The [redacted] examined four literacy areas:

a. Occupational knowledge
b. Consumer literacy
c. Health literacy
d. Legal literacy

and at the same time, examined [redacted]s:

a. Newspaper reading
b. Computation
c. Forms completion
d. Sign reading

as well as overall functional competence. The full questionnaire used during the survey is shown in Appendix 6.

## 2.24 Previous Instruments

Nine of the questions utilized in the survey closely resemble questions utilized by previous literacy surveys, principally the Adult Performance Level Project (Northcutt, 1975) discussed in Section 2.21 and Reading/Everyday Activities in Life (Lichtman, 1972). An additional thirteen questions are somewhat similar to ones utilized by these previous studies. (See Appendix 2-3.) However, it is believed a close comparison of the A.I.E.P. instrument with the two referenced instruments shows clearly that questions constructed for use by the A.I.E.P. Survey were consistently less complex, and though measuring similar tasks, measured those tasks at a significantly lower performance level than had the previous national studies. This accurately reflects this survey's goal of measuring minimal survival or functional literacy skills in accordance with the goals of the Indian community.

## 2.25 A.B.E. Pilot Study

The instrument was utilized in a pilot study to examine the validity of the instrument among non-Indian populations. With the cooperation of the Norman Adult Basic Education Program, three adult basic education classes were selected to be included in the pilot study. Students in these classes had been attending the class for either three or four class periods (approximately two weeks) prior to administration of the instrument.

The questionnaire was revised so as to exclude references to the Indian population and was generalized to a case study format involving Joe and Ellen Brown rather than Joe and Ellen Bigcrow. Since the Adult Basic Education (A.B.E.) study involved a classroom setting, the instrument also had to be put into booklet form. Each question was placed in the booklet opposite the visual stimulus to which it referred. Students were asked to complete the questionnaire at their own pace and were encouraged to ask any questions they might have had concerning any of the questions. The results comparing functional literacy among this test group to a comparable adult Indian group are discussed in detail in Section 4.53.

## 2.3 Issues Associated with Utilizing Field Interviewers

### 2.31 Pilot Study of Interviewer Effectiveness

A study was conducted on the effect of ethnic differences in interviewer effectiveness to determine whether there were differences between the effective response rate of interviewers of Native American heritage compared to those of white Caucasian interviewers when interviewing respondents from Native American communities (see Appendix 3-4). The data from this study, shown in Table 2-06, indicated that a significant difference did exist. Indian respondents were more likely to participate in a survey interview when contacted by an Indian interviewer than when contacted by a white interviewer. As a result of this pilot study, all data for this research was collected by Native American interviewers. Interviewers were identified within each tribal group to interview members within their own tribe. Upon the agreement of the tribes involved, four interviewers interviewed some respondents residing within their interviewing area who were not of their own tribe when an interviewer from that tribe could not be identified in that geographical area.

### 2.32 The Interviewing Process

Prior to identifying and training field interviewers, research was conducted to help anticipate biases in the data caused by the interviewing process. By focusing on the interviewing process which has been emphasized by other investigators, three types of bias were identified. These types were: bias due to the interviewer, bias due to the respondent and bias due to the interaction between the interviewer and the respondent.

Bias due to the interviewer. Much of the work on interviewing has focused on the interviewer (Kahn and Cannell 1957, 1968; Hyman 1954; Axelrod and Cannell 1959; Sudman 1966; Hauck and Steinkamp 1964; Steinkamp 1964). The process of collecting data by using personal interviews consists essentially of selecting and training a group of interviewers who then

## TABLE 2-06

## ANALYSIS OF THE ASSOCIATION BETWEEN ETHNICITY AND RESPONSE RATE

### RESPONSE RATES

| | Interviewer's Ethnicity | |
|---|---|---|
| Respondent's Ethnicity | White | American Indian |
| White | | |
| Completed Interviews | 18 | 10 |
| Refusals | 4 | 9 |
| American Indian | | |
| Completed Interviews | 11 | 19 |
| Refusals | 7 | 2 |

### CHI SQUARE ANALYSIS OF REFUSALS TO PARTICIPATE

| | Interviewer's Ethnicity | |
|---|---|---|
| Respondent's Ethnicity | White | American Indian |
| White | 4 | 9 |
| American Indian | 7 | 2 |

Chi-Square = 4.70
df = 1
$p < .05$
phi = .462

conduct interviews. If they are carefully selected and well trained and if they go about their work conscientiously, one might suppose the data they collect would be accurate. If the results leave something to be desired, then one should re-examine the interviewer selection and training, and devise checks to prevent lax or inaccurate work.

The research by Hauck and Steinkamp (1964) and their attempt to relate characteristics of the interviewer to measures of performance provided this project with three measures of interviewer effectiveness:

1. Contact rate. The contact rate measures the percentage of addresses in which the interviewer makes contact with a person eligible to be interviewed compared to total attempts.
2. Response rate. The response rate is defined as the ratio of the number of actual interviews completed to the number of contacts.
3. Completeness rate. The completeness rate for a given item under investigation is the percentage of interviews in which requested information is fully completed.

The analysis of interviewer effectiveness for the A.I E.P. interviewers is provided in Section 4.12.

Bias due to the respondent. A second basic approach to the analysis of the interview was to focus attention on the influence of the respondents to the quality of the data collected. The behaviors of the respondents to the interviewing process may be explained in terms of his perception of the situation and his motivation. Work by Cannell and Axelrod (1956) reported that many people enjoyed being interviewed. Thus, people liked talking to someone who was friendly and supportive, interested in what they say and who never criticized them or disagreed with them. A major objective of the interviewer training program, therefore, was to train the interviewers to successfully build and establish rapport with the respondent.

## ADULT INDIANS ARE MORE LIKELY TO RESPOND TO AN INTERVIEW WHEN CONTACTED BY ANOTHER NATIVE AMERICAN.

Bias due to the interaction between the interviewer and the respondent. There is a ~~substantial body of evidence~~ reporting that what happens in an ~~interview may be influenced by~~ major discrepancies between ~~group memberships of the interviewer and the respondents~~. In addition to the pilot study discussed above, evidence has clearly demonstrated that, within the United States, ~~social differences have an important influence on the outcome of the interviewing process~~, at least for some topics of investigation. (Hyman 1954; Davis 1962; Katz 1942; Ehrlich and Riesman 1961) There also seem to be differences in response attributable to discrepancies in social status, age and sex. The importance of these discrepancies however, seems to depend upon the topic of the inquiry.

Respondents as well as interviewers have a role and it sometimes has been suggested that one of the most important jobs the interviewer has is to train respondents in that role. Looking at the interview as a process of communication, the central question is, "What are the conditions under which effective communication will occur?" It is not difficult to specify the requirements.

1. The ~~respondent must understand correctly the questions~~ which are being asked of him.
2. The ~~respondent must himself possess the information being requested~~.
3. The ~~respondent must be willing and able to communicate~~ the information.

4. The ~~system of receiving and recording~~ the information ~~must function correctly~~. That is, in an interview the interviewer must hear correctly and write down correctly the answers as given.

Training manual. A manual was developed to train American Indians to be field interviewers within their own communities. The greatest part of this manual dealt with the interviewing process and with eliminating the potential biases in the data discussed above. General instructions, preliminary sampling work, a general statement of project purpose and how it is to be achieved, as well as full interviewing instructions were included in this manual which is discussed in more detail in the following section.

## 2.4 Selection and Training of Field Interviewers

An overview of the field interviewer selection and training process is shown in Figure 2-07. The discussion of selection and training methods used by the Adult Indian Education Project includes a review of procedures used to identify the interviewer trainees and a description of the interviewer training program.

### 2.41 Recruitment and Selection

~~Field interviewers were recruite~~d initially ~~through the business councils~~ or committees ~~of the tribes' at the same time that permission was secured for the tribe to participate in the survey~~. A job announcement and description was distributed among council members, and others within the tribe, which outlined the basic activities of the job, the experience and qualifications required, and specific duties and responsibilities to be performed by field interviewers. Secondly, this job announcement was distributed in the form of a news release among major Indian newsletters in the state. (See Appendixes 3-1 and 1-4.)

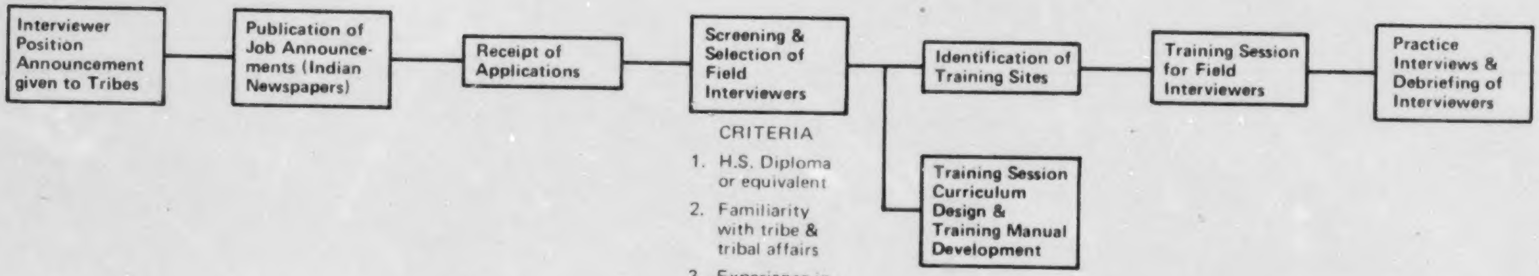
~~Applications~~ for the field interviewer positions ~~were taken~~ and, as formal permission and tribal samples were obtained from several tribes within a region, field interviewer ~~trainees were identified from those tribes~~ and a training session was set up in that locale.

The field interviewer trainees were selected on the basis of six criteria:

1. high school or high school equivalency completion;
2. familiarity with people within the tribe and with tribal affairs;
3. previous experience in some form of employment demonstrating an ability to communicate;
4. past experience demonstrating reliability and dependability;
5. the approval of the tribe; and
6. residence in an area corresponding to the residence of a sufficiently high proportion of the respondents to be interviewed.

## FIGURE 2-07

## FIELD INTERVIEWER SELECTION AND TRAINING


Interviewer Position Announcement given to Tribes
Publication of Job Announcements (Indian Newspapers)
Receipt of Applications
Screening & Selection of Field Interviewers
Identification of Training Sites
Training Session for Field Interviewers
Practice Interviews & Debriefing of Interviewers
Training Session Curriculum Design & Training Manual Development

CRITERIA

1. H.S. Diploma or equivalent
2. Familiarity with tribe & tribal affairs
3. Experience in personal communication
4. Reliability & dependability
5. Tribal approval
6. Residence in local of appropriate survey respondants

Adult Indian Education Project
Norman, Oklahoma 1976

~~Adult Indian applicants~~ from participating tribes ~~attended a one or three-day training session~~ (for which they were paid stipend and mileage) ~~before they were formally hired.~~ as project field interviewers. Figure 2-08 shows the location of the interviewers across the state.

### 2.42 Training

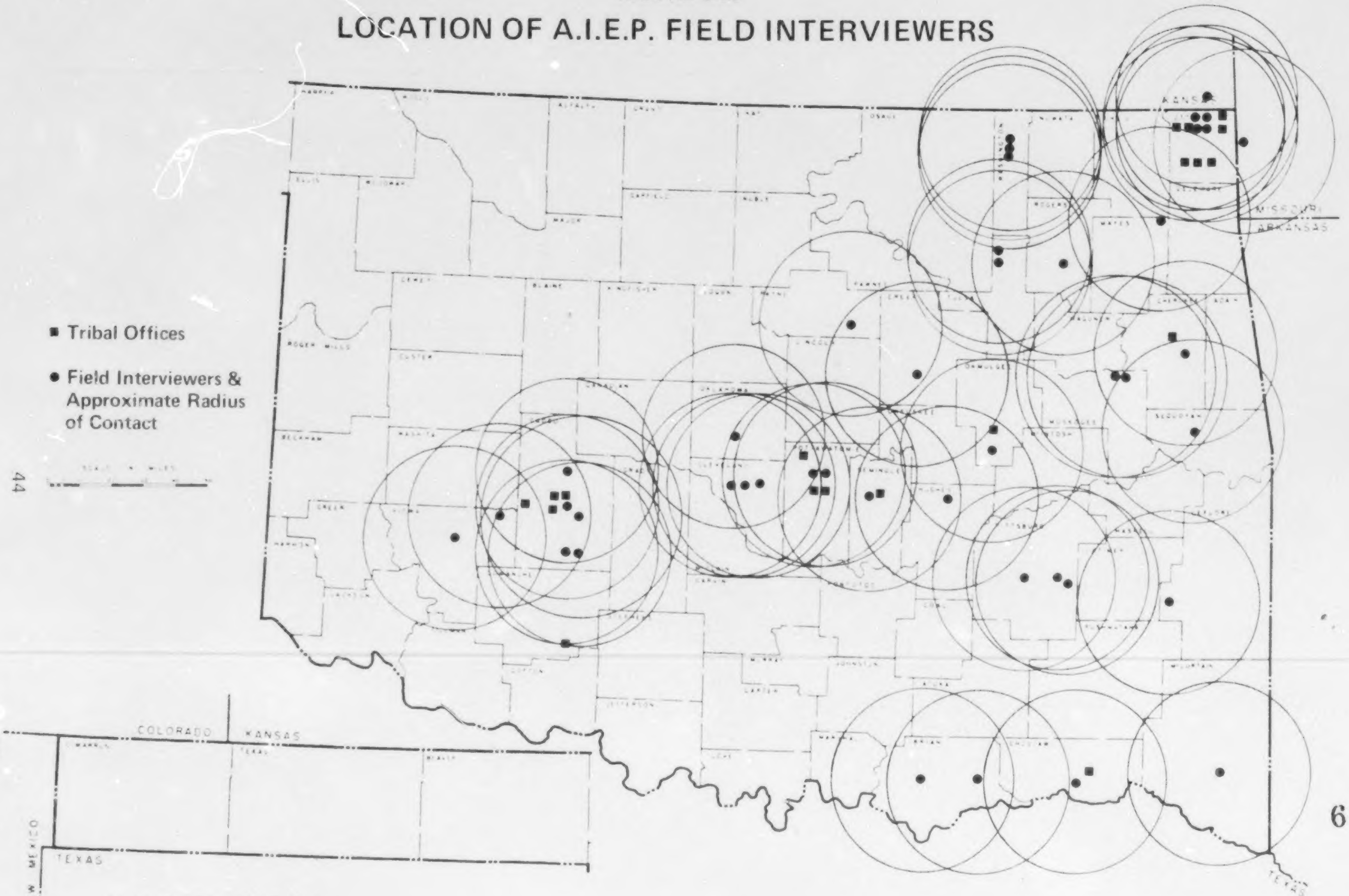
~~The field interviewer training programs served basically four functions.~~ First, the programs were intended to ~~fully orient~~ the field interviewer trainees ~~with the background purpose and activities~~ of the Adult Indian Education Project. The ~~training manual and activities were designed~~, second, ~~to instruct~~ the field interviewers ~~in the techniques~~ associated ~~with field interviewing~~, and third, ~~to prepare~~ the field interviewer trainees ~~for their role as field interviewers~~ both in relation to the community among which they would be working and the project for which they were collecting data. Finally, attention was given as part of the training programs ~~to instructing field interviewer trainees~~ in the ~~administrative, and record keeping~~ duties necessary for data collection, and in procedures of communicating with the Norman office.

In total ~~nine field interviewer training programs were held~~. (See Appendix 3-2.) Four of the first training sessions involved three-day training periods. The other training programs were consolidated one-day training sessions. In both cases seven to ten days following the original training session, a debriefing session was held. ~~The overall design of~~ the ~~interviewer training program~~ was centered principally ~~around a field interviewer's training manual~~.

Introduction of the trainees to the survey. Interviewer trainees were informed before training that their job basically consisted of: identification of selected addresses provided by project staff; traveling by private automobile to the appropriate address; interviewing selected adult Indians; recording the responses on prepared questionnaires, and completing prepared forms and forwarding those forms to the central office.

FIGURE 2-08

## LOCATION OF A.I.E.P. FIELD INTERVIEWERS



Adult Indian Education Project
Norman, Oklahoma 1976

These responsibilities were then reviewed as the first topic of the training session.

As part of the orientation to their work with the Adult Indian Education Project, trainees were shown a statement of professional ethics of the Adult Indian Education Project governing activities in the field and emphasized the importance of their position as representatives of the tribe and the American Indian Institute. This and the other introductory activities were designed to prepare field interviewers for their role as professionals who were helping the leaders and people of their community. Once the interviewers gained a sense of confidence in their role, they were better able to help the respondent understand his/her role in the interviewing situation.

**FORTY A.I.E.P. FIELD INTERVIEWERS WERE TRAINED TO INTERVIEW PEOPLE WITHIN THEIR OWN TRIBE.**

The interviewers were informed about the basic purposes of a scientific survey in general, the specific steps in conducting a survey, what kinds of survey questions were generally asked, when a survey was generally conducted, and how the information was used. This information then was related to the specific activities of the Adult Indian Education Project in its effort to survey functional literacy among adult Indians in the state of Oklahoma. Field interviewer trainees were told about the background and development of the questionnaire and the potential uses of the survey results.

Conducting the interview. Trainees were instructed in using the questionnaire. This instruction included how to ask the questions in order to insure the maximum accuracy of respondent's answer, how to utilize the questionnaire in maintaining rapport and ways in which the interviewer could probe when necessary to clarify either a question or a respondent's response. The field interviewer trainees were told of the basic rationale behind the sample procedures including sampling principles, the importance of sampling to the quality of data obtained, sampling procedures utilized in the field and rules governing contact with sampled respondents.

The interviewer trainees were instructed in techniques of building a good interviewing relationship including initial introduction, answering the respondent's questions, establishing rapport with the respondent and maintaining respondent's receptiveness, and what to do in case the respondent was busy or away.

Recording the interview. Aspects of the training were concerned with recording the scheduling and results of contact attempts. The training also presented some strategies to be utilized when a respondent was unable to or unwilling to participate in the survey or when, for other reasons, the interviewer was unable to obtain the interview.

Trainees were taught the rules governing the recording and editing of the interview onto the questionnaire form. The field interviewer trainees were asked to complete the questionnaire individually in order that they might (1) become fully familiar with the questionnaire and how to fill it out, (2) experience what it was like to be a respondent and (3) to gain an appreciation of why the respondent was not asked to fill out the questionnaire in writing and how they as field interviewers would be helping the respondent by making the interviewing process go as smoothly as possible.

Role playing. The field interviewers were asked to role play the interviewing situation first as respondent and then as interviewer. These role playing interviews were videotaped, in order again that they might see themselves as a professional in the role of field interviewer, and see the importance of that role. In this way the field interviewer training program hoped to provide the best opportunity for field interviewers to develop their skills as professionals while at the same time providing the most accurate data possible for the survey.

Administrative procedures. In addition to the actual questionnaire form, the interviewers were asked to complete mileage forms as an official record of their mileage traveled, miscellaneous expense forms as a record of any allowable expenses they incurred while working with the project (e.g., postage, pencils, etc.), and work sheets as a record of time spent performing project functions. As one of the final topics of the initial training session, the rules governing the completion of these forms were explained. Procedures for communication with the Norman central office were discussed. Interviewer trainees were told the ways in which each administrative staff member would be able to be of assistance to them in resolving any problems encountered while interviewing.

The payment schedule for completed interviews was discussed with the trainees. This schedule included an incentive rate increase based on number of completed interviews. The payment schedule was:

$5.00 each interview, interviews 1 to 10

$6.00 each interview, interviews 11 to 20

$7.00 each interview, interviews 21 and over

$2.50 each interview attempt in which the potential respondent either refused or was permanently unsuitable for interview or respondent was not at home (even after four contact attempts).

$.12 per mile travel reimbursement

Debriefing. At the conclusion of the training program, each field interviewer was given names of respondents to interview. A week to ten days later, interviewers returned and reviewed the highlights of the training program with the project staff. By this time they had had actual experiences and were able to ask questions about any difficulties they were having or parts of the training they did not fully understand.

## 2.5 Data Collection

### 2.51 Interviewing Respondents

*Contact attempts.* Interviews were conducted by 40 American Indian field interviewers among the membership of their tribe. Utilizing names provided by the Adult Indian Education Project's random sampling of tribal membership lists, field interviewers attempted to contact respondents. Interviewers recorded the day, time of day and results for each attempted contact. Procedures were provided for recording inaccuracies in respondent addresses provided by the tribal list. Procedures were also provided for (1) respondents who were permanently unsuitable for interview (e.g., mentally retarded, or hospitalized, or incarcerated for the duration of the project); (2) respondents who refused to participate in the literacy survey; and (3) households in which there were no eligible respondents. Interviewers made up to four contact attempts for those respondents who were not at home or were temporarily unavailable. For tribes where the respondents name and address provided had been taken from a household or mailing list, the person initially contacted at that household was asked to provide some preliminary information which enabled the interviewer to randomly select the actual survey respondent from within the household.

*Interviewing.* Contacted respondents who agreed to participate in the survey were informed of the basic purposes of the project. Respondents were asked to read cards which contained everyday reading materials. They were then asked questions that required that they be able to read and comprehend at least a minimal amount of information contained in these materials.

**THE QUESTIONNAIRE USED A CASE-STUDY FORMAT CENTERED AROUND WHAT WAS CONSIDERED TO BE A TYPICAL NATIVE AMERICAN FAMILY.**

As discussed in Section 2.23, a case-study format was used; that is, respondents were asked to help Joe and Ellen Bigcrow with some questions they were facing in the area of consumer economics, jobs, health and legal matters. The interview was conducted in a manner which hopefully resembled natural conversation.

The interviewers handed each card to the respondent and then asked the question associated with that card. The interviewers then recorded the respondent's answer on the questionnaire form. Respondents were encouraged to take as much time as needed and to use pencil and paper, if needed, on any question requiring arithmetic.

At the end of the literacy questions, the respondents were then asked a series of questions concerning the extent and type of education and training they had attained. In addition, a variety of questions were asked concerning the respondent's personal, social and tribal background and present occupation.

Interviewers recorded respondent's answers according to procedures outlined during training. Any responses that the interviewer was uncertain of were clarified. Comments made by the respondents during the interview were recorded as were the interviewer's reactions to how the interview had gone.

### 2.52 Field Coordinating

The A.I.E.P. office mailed an introductory letter (see Section 3.31 ) to each of the respondents being contacted generally just prior to the interviewer's visit in order that the interviewers purpose might be validated and at least some of the purpose of the study explained in advance. All of the materials related to the interview including questionnaires, forms, and respondents names were mailed from the central office to the interviewers as needed.

Field Interviewers coordinated their data collection activities with the field coordinator in the central office. They mailed completed interviews and completed mileage, time and miscellaneous expense forms to the central office each week (on Friday or Saturday). Once received, these materials were checked for accuracy and payment requests were submitted to the University of Oklahoma purchasing system. Payment checks were generally received within a week and mailed to interviewers. Interviewers were paid on the basis of completed interviews and miles traveled while obtaining those interviews.

In addition to providing interviewing materials, communication was maintained with field interviewers on roughly a bi-weekly basis either by phone or by written correspondence. During this communication, interviewers were asked about any difficulties they might have been experiencing and about their interviewing progress.

Contacts were made with local law enforcement officials and community and tribal newspapers informing them of the field interviewer's activities within their community.

As most of the interviewers were from within the community being surveyed, they were familiar enough with the community to locate respondents, some of whom they already knew. When they had difficulty in locating a respondent's address because it was on a rural route, they gained assistance from their contacts within the community.

## 2.6 Reduction and Analysis

### 2.61 Data Reduction

The Adult Indian Education Project utilized the computing services of the University of Oklahoma, Norman, to process data involved in the survey. The University's facilities consisted of an IBM S/370-158 computer. One of the packaged programs available as part of the University computing system was the Statistical Package for the Social Sciences SPSS 8 Release 6.02 , (Nie, 1975). This package of computer programs was chosen by the project staff as it provided the type of statistical and processing programs needed for this survey. The project staff performed all programming associated with data analysis using the SPSS package.

Once completed questionnaires were received by the central office and all respondent contact information recorded, they were then ready to be manually coded in preparation for the keypunching of the data. Coding assistants scored and coded completed questionnaires utilizing procedures designed to maximize the amount of information available for data analysis. (a) In some cases this consisted of coding an item right or wrong, (b) in other cases multiple choice options were assigned numbers and coding consisted of circling the appropriate number and in several cases, (c) open-ended questions yielded a variety of answers each of which had to be assigned a separate code number and that code number recorded onto the questionnaire form. In total 121 different data variables were recorded for each completed interview, with an additional 34 variables generated automatically during the data analysis process. Once coded, these data were keypunched, entered onto an SPSS file. They were then edited and corrected for any inaccuracies.

### 2.62 Data Analysis

The large quantity of data required extensive data screening and analysis. An overview of the data analysis is shown in Figure 2-09. Essentially the data analyses consisted of two tasks: first, the data was described and summarized within the four variable categories. These were: contact attempts, personal and social characteristics; tribal characteristics; and literacy and educational characteristics. The summary of the data principally involved computing the percentages of correct answers and then dividing these percentages into various demographic categories. Second, the data was analyzed to ascertain the presence and degree to which the various data items from each main category were related. The results of these analyses are discussed in detail in Chapter IV.

# CHAPTER 3

# PROJECT ORGANIZATION AND EXECUTION

This chapter will review the institutional background and the organization and execution of the Adult Indian Education Project. Included in this is a discussion of the institutional, staff and tribal resources utilized and a description of activities involved in completing the survey of educational attainment and functional literacy.

## 3.1 Institutional Affiliation

The Adult Indian Education Project (A.I.E.P.) was the principal research effort by the American Indian Institute, part of the Southwest Center for Human Relations Studies at the University of Oklahoma during the 1976 fiscal year. The survey of educational attainment and functional literacy was conducted among adult Indians in the state of Oklahoma in response to a grant from the U. S. Office of Education, Indian Education Division, Title IV, Part C. The American Indian Institute assumed full responsibility for the administration of this survey including staffing and management. The Southwest Center for Human Relations Studies in conjunction with the University of Oklahoma, provided the necessary support services including physical facilities, budgetary supervision, purchasing of materials and access to other support services (computing, printing, etc.).

## 3.2 Project Organization

The resources utilized on the project included three components: a Norman component, a tribal component and an intertribal component. The organization of these components is shown in Figure 3-01.

### 3.21 Norman Component

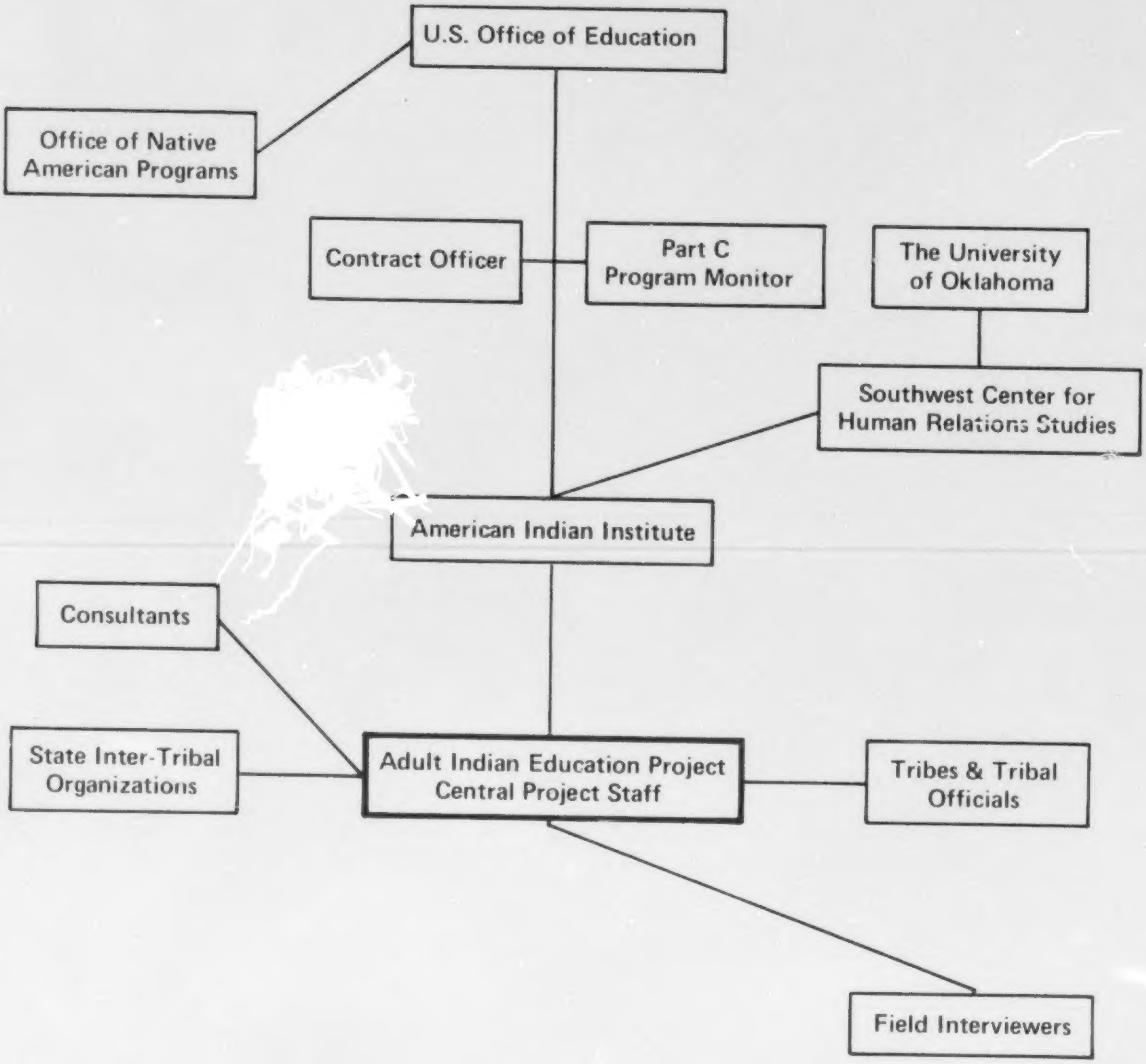
Norman resources. The first component consisted of available resources in Norman, Oklahoma, the location of the American Indian Institute and the University of Oklahoma. There were four types of resources in this area.

First, the Adult Indian Education Project worked closely with several concurrent Indian projects including the University Year for ACTION program, an ACTION volunteer project sponsoring the internship of American Indian students to work with various tribal and intertribal organizations in the state of Oklahoma. Five of the members of the Norman staff were University Year for ACTION interns. Adult Indian Education Project staff also worked closely with the staff of the American Indian Institute. The Institute published a newsletter describing the various activities of the Institute including the Adult Indian Education Project and this aided in maintaining contact with many tribal and intertribal organizations.

Second, many of the facilities, resources and personnel of the University of Oklahoma were made available to the staff of the Adult Indian Education Project. These resources included: (1) the University library; (2) University computing services; (3) printing and graphic services; (4) professional educators and social scientists who provided advice in the design and implementation of the research project; (5) public information and news release services; and (6) personnel services.

Third, because the University of Oklahoma was in close proximity to American Indian communities, Norman was also the location of several

FIGURE 3-01
ADULT INDIAN EDUCATION PROJECT
INSTITUTIONAL AFFILIATION


U.S. Office of Education
Office of Native American Programs
Contract Officer
Part C Program Monitor
The University of Oklahoma
Southwest Center for Human Relations Studies
American Indian Institute
Consultants
State Inter-Tribal Organizations
Adult Indian Education Project Central Project Staff
Tribes & Tribal Officials
Field Interviewers

Adult Indian Education Project
Norman, Oklahoma 1976

intertribal organizations who were part of the intertribal component discussed below (in Section 3.23).

Finally, an adult basic education program located in Norman agreed to allow the project to conduct a pilot survey among three adult basic education classes as representative of a non-Indian population. This pilot study is discussed in Section 2.25.

Staffing. Norman was the location of the project office and administrative staff of the Adult Indian Education Project. This staff included a Project Director, Program Development Consultant, Field Coordinator, Sampling Supervisor, Data Supervisor and Project Secretary. Figure 3-02 illustrates the staff organization and Figure 3-03 lists the administrative personnel.

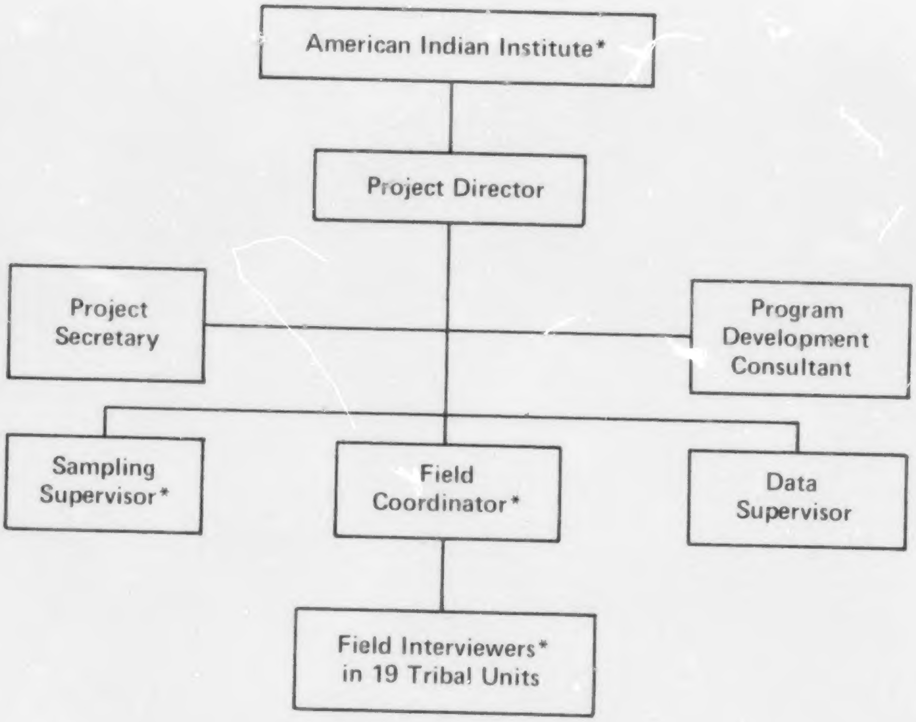
A basic objective of the organizational design was to maximize staff interaction and thereby to utilize each staff member's capability to address any particular task responsibility. A second objective was to maximize each staff member's exposure to and training in the skills associated with each phase of the project. These objectives were particularly critical since the project activities were widely varied.

Responsibilities. The Project Director was responsible for the development and execution of the research project. The project development responsibilities included the survey instrument and the sampling and data collection procedures. The management responsibilities of the director included: staffing; securing tribal endorsement and participation; selecting and training field interviewers; and analyzing and reporting the results of the study.

The Program Development Consultant was responsible for implementing most of the management decisions made by the Project Director and supervising the activities of the other staff members.

FIGURE 3-02

## ADULT INDIAN EDUCATION PROJECT ORGANIZATION OF ADMINISTRATIVE STAFF


American Indian Institute*
Project Director
Project Secretary
Program Development Consultant
Sampling Supervisor*
Field Coordinator*
Data Supervisor
Field Interviewers* in 19 Tribal Units

*Indian Employment

## FIGURE 3-03

## LISTING OF CENTRAL PROJECT STAFF

| | |
|---|---|
| Paul R. Hall | Project Director<br>(7-1-76 to 12-15-76)<br>Program Development Consultant<br>(10-1-75 to 6-30-76) |
| Peter H. Hackbert | Principal Investigator<br>(7-1-76 to 9-30-76)<br>Project Director<br>(7-1-75 to 6-30-76) |
| Jeanne Stephens* | Field Coordinator and Assistant to the Director |
| Donna Johnson* | Sampling Supervisor |
| Winona Bark* | Sampling Supervisor |
| Debbie Van Sickle* | Data Supervisor |
| Barbara Morris | Project Secretary |
| Lloyd C. Lentz | Editorial and Research Assistant |
| Greg Sathers | Statistician and Editorial Assistant |
| Thomas Nagy | Evaluation Consultant |
| Linda MacDonald* | Coding Assistant |
| Jim Denny | Coding Assistant |
| Marianne O'Neil | Keypuncher |
| Barbara Laquer | Typist |

* University Year for ACTION Interns

The Sampling Supervisor was responsible for assisting the Director in the acquisition and distribution of the samples. The Data Supervisor was responsible for assisting the Director in designing and implementing data reduction procedures.

### 3.22 Tribal Component

The tribal component of the survey involved two particular groups: tribes and tribal officials, and field interviewers within the tribes. Both groups had responsibilities critical to the success of the Adult Indian Education Project.

Tribes and tribal officials. Each tribe was contacted, given a brief overview of the project's activities and goals and asked to schedule a meeting between the project staff and the appropriate tribal council or officials involved in making the executive decisions for the tribe as a whole (see Appendices 1-2 and 1-3 ). At those meetings the background and purposes of the Adult Indian Education Project were explained in detail and the tribe was requested to: (1) endorse in writing the activities and goals of the project, (2) provide access to the most current and complete listing of tribal members and (3) provide the names of persons within the tribe who had a knowledge of the tribal members and tribal communities, who would be willing to serve as field interviewer trainees.

Though this tribal contact process was extensive and involved an extraordinary amount of travel and staff time, it was viewed as essential in obtaining knowledgeable tribal participation, which thereby insured more willing and accurate involvement of tribal members during the field interviewing process. In addition, the information obtained was done with the full knowledge and consent of the persons involved and, consequently, the foundation was established to insure that the data collected would be meaningful in making tribal decisions and would be utilized to implement any needed program modification or development.

Field interviewers. The second group of the tribal component of the research project consisted of the field interviewer trainees and, more specifically, the group of field interviewers involved in the actual data collection. In total there were 58 field interviewer trainees, representing 19 tribes, including 40 who became field interviewers. The field interviewers worked within their own tribal groups and performed 100 percent of the data collection activities. They worked with the Field Coordinator in insuring that accurate and complete data was obtained.

The first two groups of field interviewer trainees served an additional function for the Adult Indian Education Project. As discussed in Section 3.23, they were asked to critique the field questionnaire being utilized. First, their comments were offered about the general procedures and intent of the instrument. Second, interviewer trainees critiqued each of the questions and measures involved in the instrument. In light of their evaluation, the questionnaire was redesigned specifically to be more sensitive to the perspective and concerns of the respondents and easier in format for the field interviewers to use in conducting interviews.

### 3.23 Intertribal Component

The third resource component of the Adult Indian Education Project consisted of the various intertribal organizations throughout the state of Oklahoma representing a variety of concerns but having in common a primary interest in the education and service of American Indian adults.

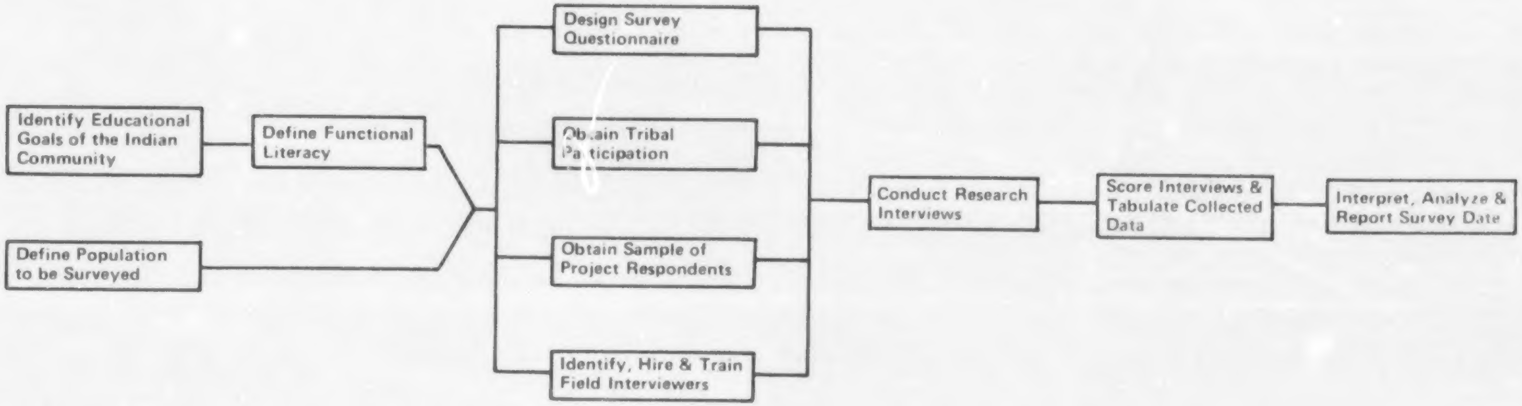
These groups and the persons serving as their representatives served a particularly critical function for this research project. Initially a review panel composed of members of these organizations evaluated potential survey questions as described in Section 2.22 and selected questions which were most beneficial to adult Indians within their community and in the state of Oklahoma. They were particularly capable of serving in this capacity due to their broad and varied daily exposure to the needs of adults in their communities. In addition, they were practical in their concerns due to their own efforts to provide services addressing the needs of the people in their community.

**TRIBES AND OTHER INDIAN ORGANIZATIONS WILL EVENTUALLY BE CALLED UPON TO IMPLEMENT ANY PROGRAM MODIFICATION OR DEVELOPMENT RECOMMENDED BY THIS LITERACY AND EDUCATIONAL ASSESSMENT.**

Second, but in the long run more critical, these intertribal organizations, along with the tribes, will provide any new or modified services called for by this research in its assessment of educational needs. They will be primary users of the data collected and the resulting analysis of the educational needs of the adult Indian community in Oklahoma. Therefore, both the tribes and the intertribal organizations are serving even beyond the funding and time parameters of the Adult Indian Education Project as a resource component which will potentially implement the policies and programs of the U. S. Office of Education and other federal agencies involved in adult education among American Indians.

FIGURE 3-04

STEPS OF PROJECT DEVELOPMENT


Identify Educational Goals of the Indian Community
Define Population to be Surveyed
Define Functional Literacy
Design Survey Questionnaire
Obtain Tribal Participation
Obtain Sample of Project Respondents
Identify, Hire & Train Field Interviewers
Conduct Research Interviews
Score Interviews & Tabulate Collected Data
Interpret, Analyze & Report Survey Date

Adult Indian Education Project
Norman, Oklahoma 1976

## 3.3 Project Management

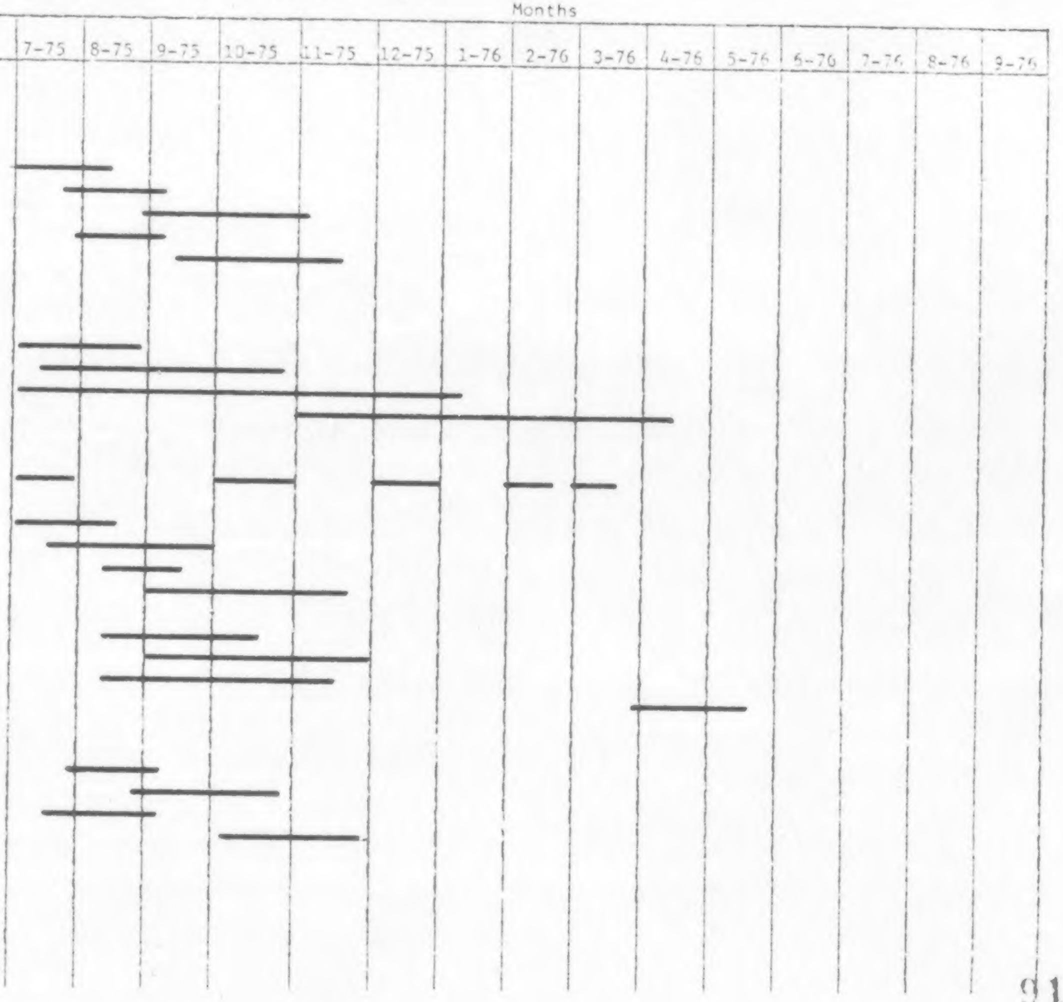
### 3.31 Project Activities and Sequencing

The issues involved in managing and executing the research project were in many ways a direct result of the methodological issues discussed in Chapter II. As the report details the A.I.E.P.'s survey of functional literacy and education attainment among adult Indians in Oklahoma involved six project phases. These were: (1) initial project design, (2) instrument development, (3) identification of respondents and interviewers, (4) data collection, (5) data reduction and analysis design and (6) analysis and reporting. Each of these phases is described elsewhere in this report. Though the project tasks were distinct, many times the activities associated with these tasks were performed during overlapping time periods as indicated on Chart 3-05 listed on the following pages. This chart shows the sequence of the various activities involved in executing this educational needs survey. A simplified overview of the project activities is presented in Figure 3-04.

## FIGURE 3-05

SEQUENCE OF PROJECT TASKS AND ACTIVITIES *

Project Tasks



1.0 INITIAL PROJECT DESIGN

1.10 Delineating Research Parameters
1.11 Identify community educational goals
1.12 Define adult American Indians
1.13 Initially define literacy according to goals
1.14 Initially define educational attainment
1.15 Define personal and social characteristics to be surveyed

1.20 Obtaining Initial Survey Information
1.21 Identify data currently available
1.22 Conduct functional literacy literature search
1.23 Obtain available functional literacy instruments
1.24 Identify tribes and tribal contact persons

1.30 Designing Procedures
1.31 Identify, clarify and develop University policies and procedures
1.32 Identify and train administrative staff
1.33 Design sampling procedures
1.34 Conduct pilot study of interviewer effectiveness
1.35 Design field interviewer recruitment and selection criteria
1.36 Design instrument development procedures
1.37 Design data collection procedures
1.38 Design field interviewer supervisory techniques
1.39 Identify data analysis hardware/software

1.40 Analyzing and Reporting Initial Project Design
1.41 Report functional literacy literature review
1.42 Report field interviewer supervisory techniques
1.43 Report computer coding manual and procedures
1.44 Report First Interim Report

Initial project design. The initial project design phase included the tasks of (1) delineating research parameters, consistent with both the goals of the adult Indian community and the purposes of the U. S. Office of Education (see Section 1.13), (2) obtaining initial survey information on current data and instruments and on tribes comprising the Oklahoma Indian community (see Section 1.22), (3) designing procedures associated with research methodology and all phases of the project's execution, (4) analyzing and reporting initial project design, including specific background information and a First Interim Report (Hackbert, 1975) providing an overview of this first phase of the project.

*This management planning model was taken from Stufflebeam (1971).

Office of Indian Education
Part C

FIGURE 3-05 (continued)

SEQUENCE OF PROJECT TASKS AND ACTIVITIES

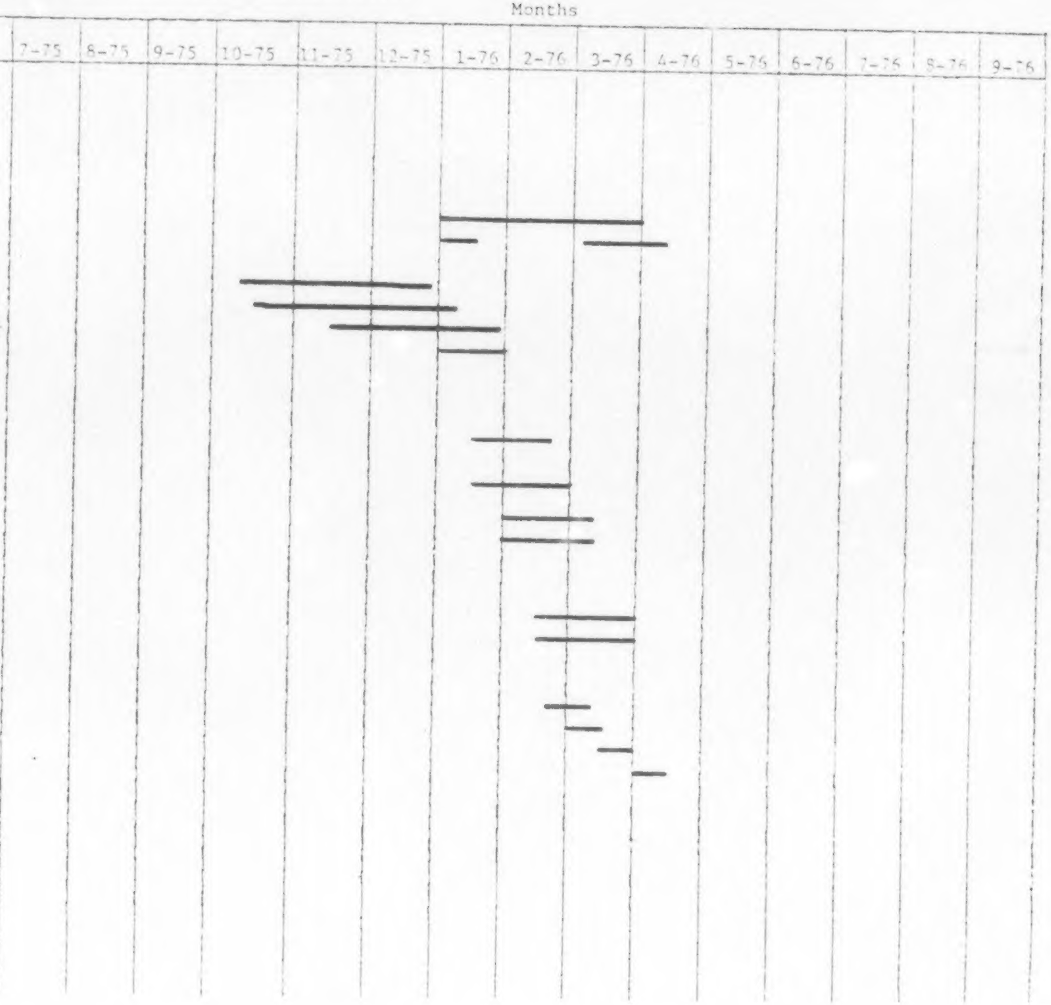
Project Tasks

2.0 INSTRUMENT DEVELOPMENT

2.10 Constructing Initial Questionnaire
2.11 Identify interview/questionnaire model
A Design model appropriate to community and previous research
B Field test model
2.12 Select initial indicator questions
A Identify pool of potential indicator questions
B Identify review panel for indicator selection
C Survey panel on the usefulness of questions in pool
D Analyze survey results and identify most beneficial questions
2.13 Design initial questionnaire
A Evaluate selected questions for duplication of measurement
B Identify questions for which a visual stimulus could be utilized
C Evaluate selected questions for a range of difficulty
D Construct initial questionnaire

2.20 Pretesting Instrument
2.21 Conduct validity tests
2.22 Conduct reliability tests

2.30 Field Testing Questionnaire
2.31 Field test questionnaire
2.32 Rewrite questionnaire
2.33 Field test questionnaire
2.34 Construct final questionnaire
2.35 Conduct pilot test of instrument among A.B.E. classes

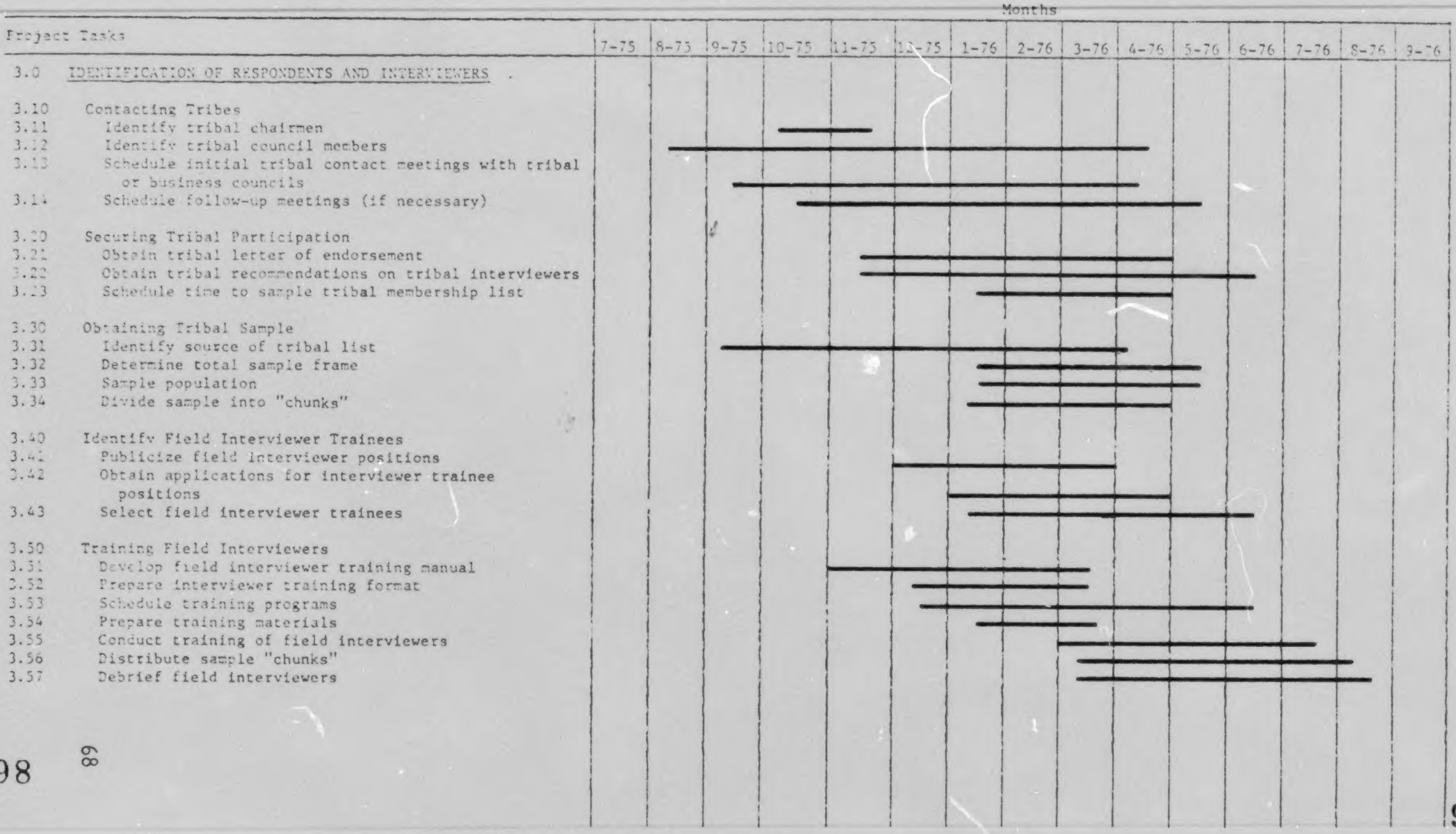


Instrument development. The second phase of the project was the development of the instrument to be utilized in conducting the survey. This development process, described in Section 2.2, involved four tasks, the first of which was construction of initial questionnaire. An interview/questionnaire model was designed and field tested in conjunction with a review panel of American Indian professionals from Oklahoma communities. Initial indicator questions of benefit to adult Indians were identified and from these an initial questionnaire was constructed. This questionnaire was designed to be non-repetitive, easy to administer and provide for the measurement of a range of performance levels.

Once the initial questionnaire was designed, three testing and finalizing steps were taken. The instrument was pretested for validity and reliability. It was then field tested and rewritten twice utilizing the field interviewers, who were at the time, members of the community being surveyed and responsible for administering the questionnaire effectively. The final instrument was then utilized to conduct a pilot survey among adult basic education classes.

FIGURE 3-05 (continued)

SEQUENCE OF PROJECT TASKS AND ACTIVITIES



Project Tasks

3.0 IDENTIFICATION OF RESPONDENTS AND INTERVIEWERS

3.10 Contacting Tribes
3.11 Identify tribal chairmen
3.12 Identify tribal council members
3.13 Schedule initial tribal contact meetings with tribal or business councils
3.14 Schedule follow-up meetings (if necessary)

3.20 Securing Tribal Participation
3.21 Obtain tribal letter of endorsement
3.22 Obtain tribal recommendations on tribal interviewers
3.23 Schedule time to sample tribal membership list

3.30 Obtaining Tribal Sample
3.31 Identify source of tribal list
3.32 Determine total sample frame
3.33 Sample population
3.34 Divide sample into "chunks"

3.40 Identify Field Interviewer Trainees
3.41 Publicize field interviewer positions
3.42 Obtain applications for interviewer trainee positions
3.43 Select field interviewer trainees

3.50 Training Field Interviewers
3.51 Develop field interviewer training manual
3.52 Prepare interviewer training format
3.53 Schedule training programs
3.54 Prepare training materials
3.55 Conduct training of field interviewers
3.56 Distribute sample "chunks"
3.57 Debrief field interviewers

Identification of respondents and interviewers. The third phase of the research project management was the identification of respondents and interviewers. This phase involved contacting tribes and tribal officials at a series of meetings held across the state, talking with some 30 tribes, individually and in intertribal councils, on 60 different occasions. At these and following meetings, tribal participation was secured through a formal letter of endorsement, recommendations for interviewers and permission to sample tribal membership lists. As discussed in Section 2.12, these tribal lists were then utilized as source, or frame, from which a 10 percent random sample of potential respondents was drawn. This sample was later divided into "chunks" on a geographical basis.

While tribes were assisting the Adult Indian Education Project in identifying respondents, field interviewer trainees were recruited and selected. As Section 2.42 details, these interviewers were then trained during specially constructed training programs utilizing training materials and a complete training manual designed specifically for Native American interviewers. Once trained, the field interviewers were given initial lists of respondents to contact and after a week of interviewing, returned to the training site to discuss their experiences in interviewing to insure that all data collecting activities were going smoothly.

## FIGURE 3-05 (continued)

SEQUENCE OF PROJECT TASKS AND ACTIVITIES

| | Project Tasks | 7-75 | 8-75 | 9-75 | 10-75 | 11-75 | 12-75 | 1-76 | 2-76 | 3-76 | 4-76 | 5-76 | 6-76 | 7-76 | 8-76 | 9-76 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Months | | | | | | | | | | | | | | |
| 4.0 | DATA COLLECTION | | | | | | | | | | | | | | | |
| 4.10 | Publicizing Field Interviewer Activities | | | | | | | | | | | | | | | |
| 4.11 | Prepare and distribute news release to Indian and other community newspapers | | | | | | | | | ▬ | ▬ | | ▬ | ▬ | | |
| 4.12 | Distribute introductory letter to respondents | | | | | | | | | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | |
| 4.13 | Notify community officials | | | | | | | | | ▬ | ▬ | | | | | |
| 4.20 | Coordinating Field Interviewers | | | | | | | | | | | | | | | |
| 4.21 | Identify field areas for each interviewer | | | | | | | | | ▬ | ▬ | ▬ | ▬ | ▬ | | |
| 4.22 | Obtain maps and directories to aid field contact | | | | | | | ▬ | ▬ | ▬ | ▬ | | | | | |
| 4.23 | Distribute sample "chunks" for respondents within that area | | | | | | | | | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | |
| 4.24 | Bi-weekly contact field interviewers | | | | | | | | | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | |
| 4.30 | Conducting Interviews (Activities of Field Interviewers) | | | | | | | | | | | | | | | |
| 4.31 | Layout most effective route for contacting respondents | | | | | | | | | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | |
| 4.32 | Travel to respondent's home | | | | | | | | | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | |
| 4.33 | Conduct and record interview | | | | | | | | | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | |
| 4.34 | Schedule a return visit if respondent not at home | | | | | | | | | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | |
| 4.35 | Return to respondent's home if necessary (up to 4 contacts) | | | | | | | | | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | |
| 4.36 | Record time, mileage, miscellaneous expenses and status of conducted interviews | | | | | | | | | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | |
| 4.37 | Mail records to Norman office weekly | | | | | | | | | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | |
| 4.40 | Data Handling | | | | | | | | | | | | | | | |
| 4.41 | Design office procedure for processing completed interviews | | | | | | ▬ | ▬ | ▬ | ▬ | ▬ | | | | | |
| 4.42 | Confirm completeness of conducted interviews | | | | | | | | | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | |
| 4.43 | Process payments for interviews and mileage | | | | | | | | | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | |
| 4.44 | Record receipt of and status of conducted interviews | | | | | | | | | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | |

Data collection. Actual data collection was the fourth phase of the project. Initially the activities of the field interviewers were publicized through Indian and other community newspapers and an introductory letter was distributed to respondents to prepare them for the field interviewer visit and the project's purpose.

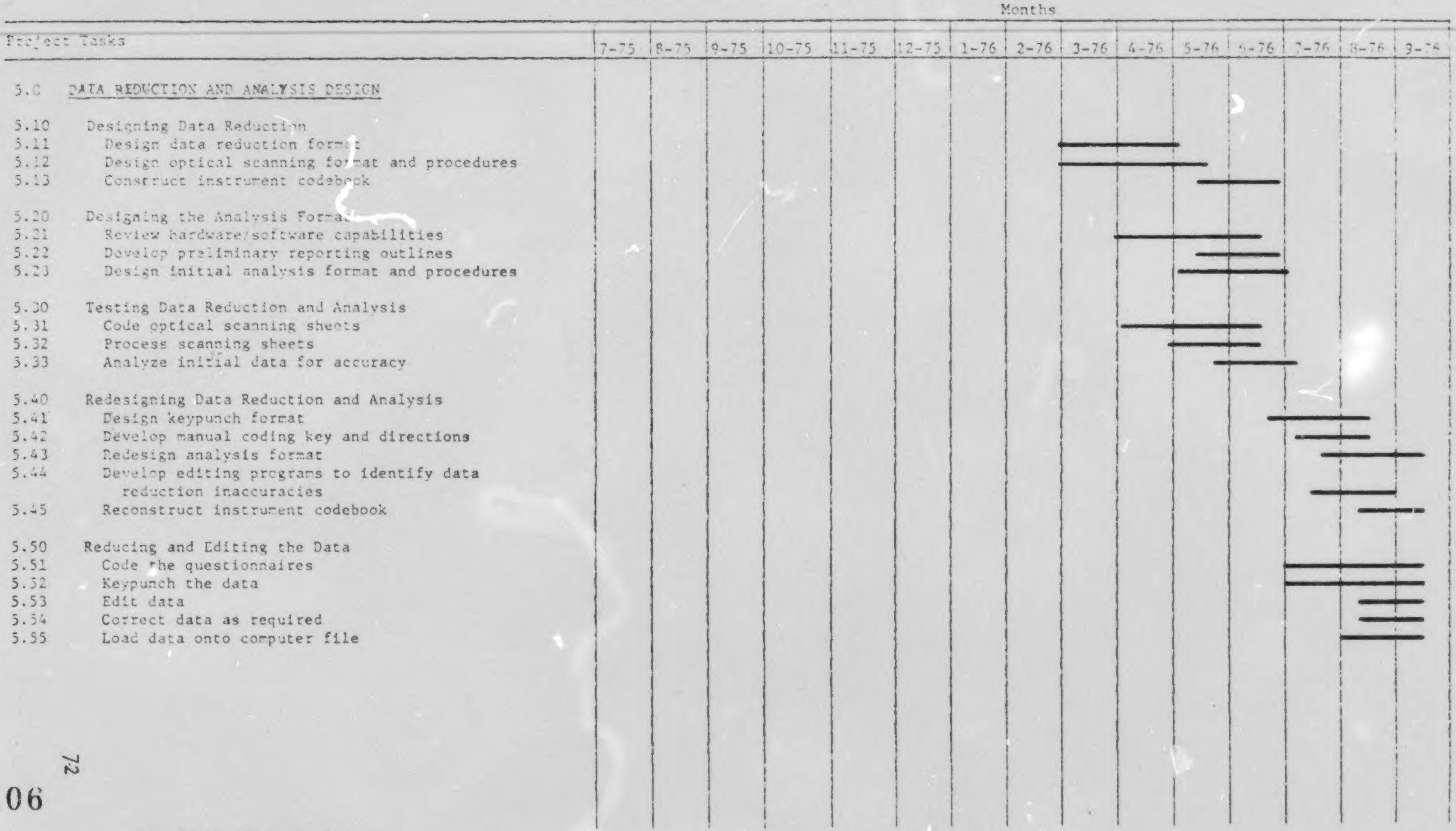
Field interviewers traveled to the respondent's home as many as four times in an attempt to contact the respondent and, once contacting them, explained further the survey's purposes and, with the respondent's permission, conducted the survey interview. Field interviewers recorded the interviews according to procedures outlined in the field interviewers training manual and also recorded time, mileage, miscellaneous expenses and the results of all attempted contacts, even ones in which no interview was conducted. This data was then mailed to the Norman office on a weekly basis.

Field interviewers coordinated their activities with the project office in Norman including obtaining and returning materials, respondent names and completed interviews. In coordinating with the field interviewers, the Field Coordinator attempted to contact field interviewers on a bi-weekly basis, discussing with them any problems they were having and providing any assistance they needed in locating and completing survey interviews.

The final phase of data collection involved the design and execution of data handling procedures in the Norman office, including confirming completeness of completed interviews, processing payments for interviews and mileage, and maintaining records on the status of distributed respondent names and conducted interviews. Once the completed questionnaires had been received and processed, they were then ready for the fifth phase of the project.

FIGURE 3-05 (continued)

SEQUENCE OF PROJECT TASKS AND ACTIVITIES



5.0 DATA REDUCTION AND ANALYSIS DESIGN

5.10 Designing Data Reduction
5.11 Design data reduction format
5.12 Design optical scanning format and procedures
5.13 Construct instrument codebook

5.20 Designing the Analysis Format
5.21 Review hardware/software capabilities
5.22 Develop preliminary reporting outlines
5.23 Design initial analysis format and procedures

5.30 Testing Data Reduction and Analysis
5.31 Code optical scanning sheets
5.32 Process scanning sheets
5.33 Analyze initial data for accuracy

5.40 Redesigning Data Reduction and Analysis
5.41 Design keypunch format
5.42 Develop manual coding key and directions
5.43 Redesign analysis format
5.44 Develop editing programs to identify data reduction inaccuracies
5.45 Reconstruct instrument codebook

5.50 Reducing and Editing the Data
5.51 Code the questionnaires
5.52 Keypunch the data
5.53 Edit data
5.54 Correct data as required
5.55 Load data onto computer file

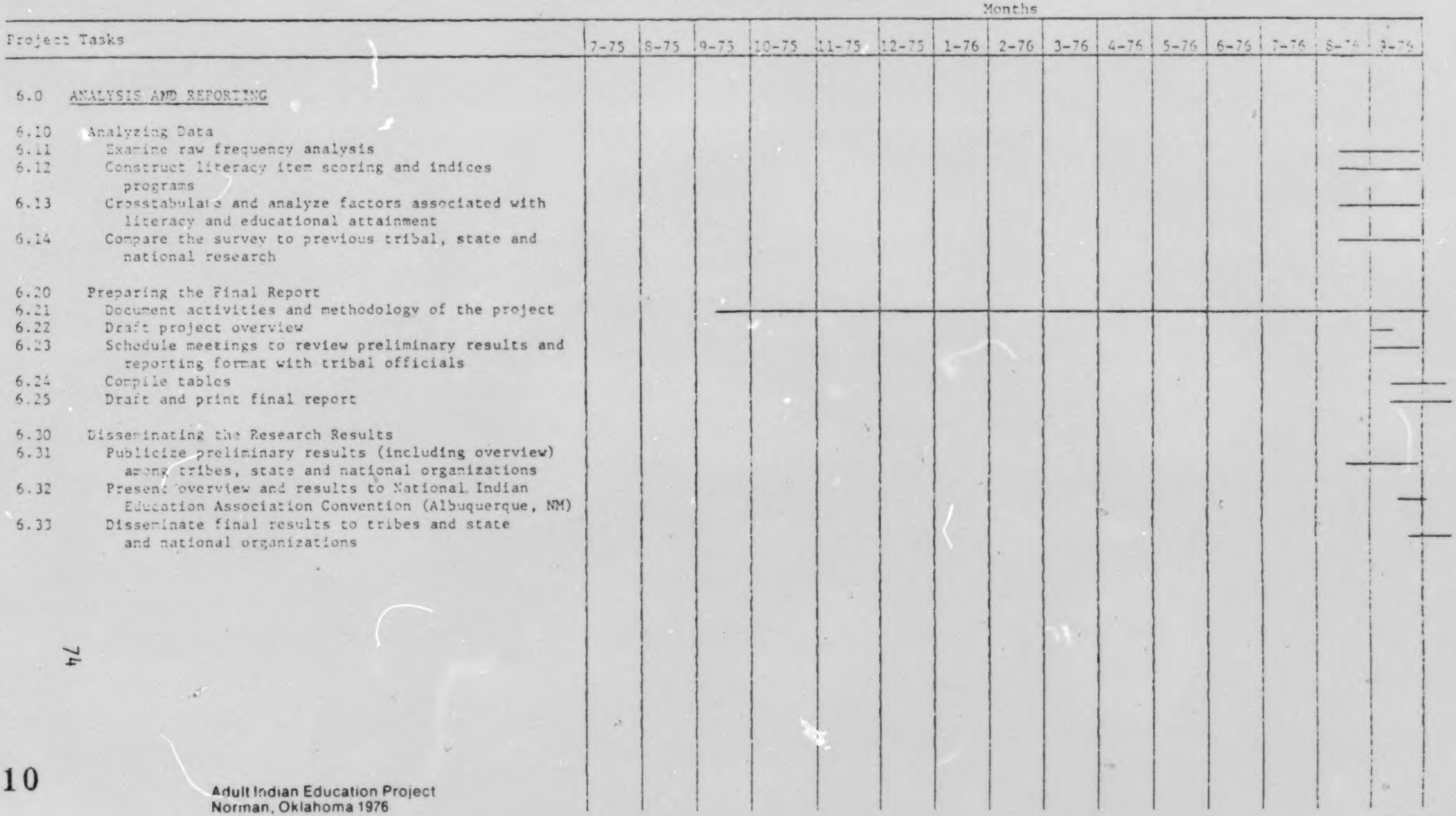
Data reduction and analysis. This fifth phase involved data reduction and analysis design. The first task associated with this phase was the design of a format for data reduction; in other words, the information from a completed questionnaire was reduced to a numerical code which were then put on computer cards. Initially, optical scanning sheets were utilized to record the information from completed questionnaires, and an instrument code book (Appendix 7) was constructed detailing the codes utilized in this data reduction process. After an initial group of completed interviews were coded, processed and put onto computer file, the data was then checked for accuracy. The results of this testing unfortunately yielded a decision to abandon optical scanning procedures and proceed to a more controllable, but more time-consuming, manual-coding and keypunching procedure.

This decision meant the data reduction, analysis and coding formats had to be redesigned. A keypunch format, and procedures for manual coding were also required (also shown in Appendix 7). The instrument code book and analysis formats were reconstructed to reflect the updated reduction and analysis formats and editing programs were developed to identify potential data reduction errors.

The last task then associated with data reduction and analysis design was the actual reducing and editing of the completed interviews into computer accessible data through coding, keypunching and editing of data and finally loading that data onto computer file.

FIGURE 3-05 (continued)

SEQUENCE OF PROJECT TASKS AND ACTIVITIES



6.0 ANALYSIS AND REPORTING

6.10 Analyzing Data
6.11 Examine raw frequency analysis
6.12 Construct literacy item scoring and indices programs
6.13 Crosstabulate and analyze factors associated with literacy and educational attainment
6.14 Compare the survey to previous tribal, state and national research

6.20 Preparing the Final Report
6.21 Document activities and methodology of the project
6.22 Draft project overview
6.23 Schedule meetings to review preliminary results and reporting format with tribal officials
6.24 Compile tables
6.25 Draft and print final report

6.30 Disseminating the Research Results
6.31 Publicize preliminary results (including overview) among tribes, state and national organizations
6.32 Present overview and results to National Indian Education Association Convention (Albuquerque, NM)
6.33 Disseminate final results to tribes and state and national organizations

*Analysis and reporting results.* The final phase of the project was the analysis and reporting of project results. Initially the data was analyzed utilizing (1) an analysis of frequencies, (2) the scoring of literacy items, and (3) the construction of literacy indices in each of four topic areas (consumer education, health education, occupational education and legal education) and four skill areas (computation, newspaper reading, sign reading and the completion of forms). The data was analyzed further by cross-tabulating and associating personal, social, tribal and employment factors with literacy and educational attainment. These results were also compared to data previously obtained from tribal, state and national research. Further, survey data was compared with data from the pilot study of the Adult Basic Education (A.B.E.) unit.

Throughout the project, activities and methodology associated with the research were documented. As the project neared completion, a project overview was drafted to provide an initial outline for the final report. Meetings were scheduled with tribal officials to review these preliminary results and discuss issues associated with the interpretation of the results. Utilizing this documentation, the results of the statistical analysis and the suggestions of the tribal officials the final report was drafted. This report was then printed and distributed to sponsors, tribes and other intertribal and educational organizations involved in the education of adult Indians.

Disseminating the research results was the task remaining for the completion of the analysis and reporting phase of this survey of functional literacy among adult Indians in Oklahoma. Preliminary results were publicized among tribes, state and national organizations. The preliminary results and an overview of the project was presented at the National Indian Education Association convention in late September in Albuquerque, New Mexico, and at the middle of December, 1976, this report was disseminated to tribes, state and national organizations.

### 3.32 Public Relations

During the fifteen month duration of the Adult Indian Education Project, the administrative staff publicized the project's efforts among several organizations likely to utilize the results of the research once completed. Previously mentioned were sponsors, tribes and intertribal organizations serving as components of the project's institutional affiliation. In addition, letters were sent to members of the American Indian Policy Review Commission Task Forces. Also, a booth was set up at the 1975 National Indian Education Association Convention in Oklahoma City and letters were sent to those convention participants requesting more information about the project.

On the tribal and state level several articles concerning the Adult Indian Education Project were included in the newsletter published by the American Indian Institute and distributed widely among those persons and organizations working in a variety of Indian services. The most fundamental public relations effort, however, was conducted by the field interviewers themselves as they worked with members of the communities in which they lived. The interviewer's enthusiasm for the project and the project's reputation in the communities across the state were critical factors in the project's success.

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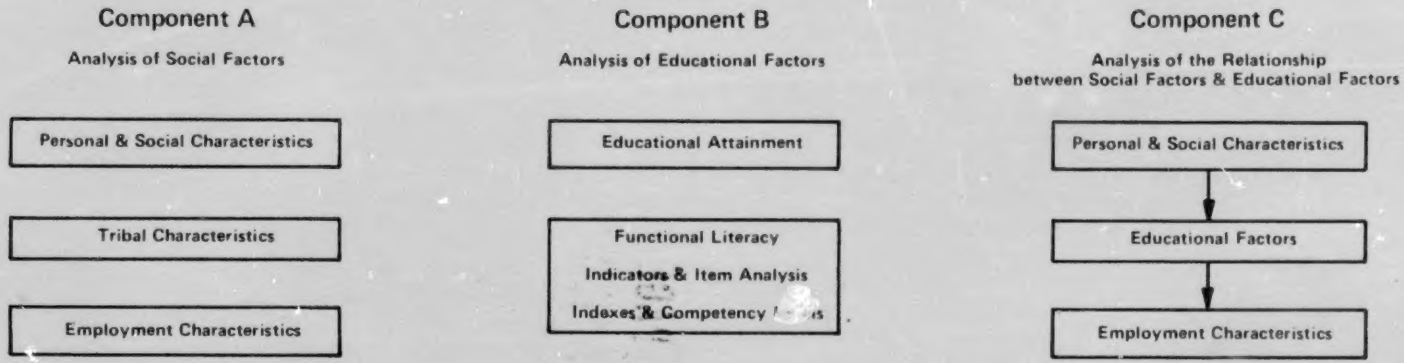
FIGURE 4-01

COMPONENTS OF THE ANALYSIS PROCESS OF SURVEY DATA


Component A
Analysis of Social Factors
Personal & Social Characteristics
Tribal Characteristics
Employment Characteristics
Component B
Analysis of Educational Factors
Educational Attainment
Functional Literacy
Indicators & Item Analysis
Indexes & Competency Levels
Component C
Analysis of the Relationship between Social Factors & Educational Factors
Personal & Social Characteristics
Educational Factors
Employment Characteristics

Adult Indian Education Project
Norman, Oklahoma 1976

# CHAPTER 4

# RESULTS

This chapter presents the findings of the survey of literacy and education among adult Indians in the state of Oklahoma. Initially, this involves a review of survey contacts and conducted interviews. Figure 4-01 outlines the main categories of analysis. Data is presented describing the characteristics of the adult American Indian in Oklahoma: Personal, social, tribal and employment. Following this, the results of the assessment of literacy and education are reviewed and described in detail so as to present a fairly comprehensive picture of the present educational status of this Indian community. These results are compared both to previous studies at the national level and to a pilot study conducted among a non-Indian population. Finally, this chapter assesses the educational needs of the adult Indian in Oklahoma as they are associated with other factors such as personal, social, tribal and employment conditions.

## 4.1 Interview Contact and Completion Rates

### 4.11 Contact Attempts

The data collection phase of the Adult Indian Education Project survey took place over a six-month period from March 1976 through August, 1976 and involved 19 tribal groups representing 70 percent of the adult Indian population in the state. Respondents included in the study resided within 44 counties across the state. Interviewers attempted to contact 1418 potential respondents sampled from tribal rolls, trying as many as four contact attempts per respondent (for a total of 2167 actual contact attempts).

Not in the sample. Of the 1418 potential respondents, 533 or 37.6 percent were not in the net sample because the name or address listed on the tribal membership list was no longer accurate. As Table 4-02 below shows, 3.6 percent of the potential respondents had deceased since the tribal membership list had been composed. Of those not in the sample 21.9 percent had moved, 9.8 percent were listed at an address that no longer existed and 33 households no longer had an adult tribal member in residence.

TABLE 4-02

FINAL RESULTS OF CONTACT ATTEMPTS

Not in the Sample

| | N | % |
|---|---|---|
| Deceased | 51 | 3.6 |
| Moved | 310 | 21.9 |
| No Such Address | 139 | 9.8 |
| No Eligible Respondent | 33 | 2.3 |
| | 533 | 37.6 |

In the Sample

| | N | % | % of Sample |
|---|---|---|---|
| Completed Interviews | 689 | 48.6 | 77.9 |
| Refused | 80 | 5.6 | 9.0 |
| Permanently Unsuitable for Interview (Hospitalized, Incarcerated, Retarded etc.) | 41 | 2.9 | 4.6 |
| Not at Home (with 4 contact attempts) | 75 | 5.3 | 8.5 |
| | 885 | 62.4 | 100.0 |
| TOTAL | 1418 | 100.0 | |

In addition to those figures shown, an additional 2.6 percent included in the sample had actually moved but were able to be located by the field interviewer. Consequently, a total of 40.2 percent of the adult Indians listed on tribal membership lists are listed at an address that is no longer correct. This was not surprising in view of the fact that most of the tribal membership lists from which the respondent names were taken were generally from 4 to 15 years old.

In the sample. The net sample for this survey included 885 adult Indians and represented 1.8 percent of the total sample frame. Seventy-five potential respondents or 8.5 percent of the net sample were not contacted because they were either not at home or temporarily unavailable even after four contact attempts; 4.6 percent of the respondents in the net sample were permanently unsuitable for interviewing due to hospitalization, incarceration, mental retardation or other similar condition; 80 of the people contacted, or 9 percent of the net sample, refused to be interviewed, generally due to lack of interest or time. Actual interviews were conducted with 689 respondents which represented about 78 percent of the net sample. Each interview took an average of 35 minutes to complete. Eleven respondents declined to answer the literacy portion of the survey.

As discussed in Addendum B, there were an estimated 63,490 adult American Indians within the state of Oklahoma. Using these figures, each of the 689 people interviewed in the survey of personal, social and tribal characteristics represented 92.1 adult Indians in the state of Oklahoma. Each of the 678 persons completing the survey of literacy represented 93.6 adults.

## 4.12 Success of Contact Attempts

Town-size response rate. Table 4-03 shows the contact and interview results among persons living in different sized towns. A dramatic difference can be seen in the results obtained among people in towns with less than 100,000 as compared to people that live in towns of 100,000

## TABLE 4-03

## FINAL RESULTS OF CONTACT ATTEMPTS BY TOWN SIZE

| Town Size of Respondent | Completed Interviews | Refused | Permanently Unsuitable for Interview | Not at Home | Deceased | Moved | No Such Address | No Eligible Respondent | Row Total |
|---|---|---|---|---|---|---|---|---|---|
| 100 - 2,500 | 50.5 | 6.2 | 3.8 | 5.0 | 3.1 | 20.5 | 8.3 | 2.6 | 100.0 |
| 2,600 - 5,000 | 54.1 | 10.1 | 1.3 | 2.5 | 4.4 | 17.6 | 8.8 | 1.3 | 100.0 |
| 5,100 - 10,000 | 51.7 | 4.2 | 3.4 | 6.4 | 5.1 | 20.3 | 7.2 | 1.7 | 100.0 |
| 10,100 - 25,000 | 51.4 | 4.6 | 0.6 | 8.0 | 4.0 | 16.6 | 9.1 | 5.7 | 100.0 |
| 25,100 - 99,900 | 48.4 | 3.7 | 3.7 | 5.1 | 2.9 | 24.2 | 11.7 | 0.4 | 100.0 |
| 100,000 and over | 27.5 | 1.8 | 1.8 | 4.6 | 1.8 | 41.3 | 16.5 | 4.6 | 100.0 |
| Town size unknown | 39.1 | 17.4 | 4.3 | 2.2 | 4.3 | 17.4 | 15.2 | 0.0 | 100.0 |

or more. For the purposes of this study, this was the division between the rural and the urban population. Completed interviews were obtained in approximately 50 percent of the contact attempts made among people living in towns of various sizes under 100,000. However, only 28 percent of the contact attempts yielded completed interviews among people living in towns of 100,000 or more.

The second significant point of differentiation among the contact completion rates was found, as might be expected, in the dramatic increase in the number of persons who were not able to be contacted because they had moved or because the address at which they were listed was no longer a correct address. This situation was found in approximately 26 percent of the adult Indians living in towns of 25,000 or less, and among 36 percent of the adult Indians living in town sizes from 25,000 to 100,000. However, almost 58 percent of the adult Indians listing as living in towns of 100,000 or more had relocated. As might have been expected, the mobility of people living in larger towns was clearly indicated. It was also found to be somewhat more difficult to locate field interviewers in the urban areas (Oklahoma City and Tulsa).

Interviewer effectiveness. The effectiveness of each of the field interviewers was analyzed in terms of contact response and completion rates. Overall 91.6 percent of the adult Indians included in the net sample were actually contacted; 85.1 percent of those contacted agreed and were able to respond to the interview; and 89.0 percent of the completed interviews were fully completed. Appendix 3-5 shows that the results of this analysis varied widely among interviewers. The number of respondents each of the Adult Indian Education Project (A.I.E.P.) field interviewers attempted to contact widely varied also, but this factor itself did not seem to have a noticeable influence on the contact, response or completion rates.

Contact effectiveness. As part of the attempt of this project to clarify issues and procedures associated with this kind of survey for those tribes or other Indian organizations interested in continuing this

## TABLE 4-04

## PERCENT OF COMPLETED INTERVIEWS OBTAINED FOR EACH CONTACT ATTEMPT BY TOWN-SIZE

| | Town-size | | | | | |
|---|---|---|---|---|---|---|
| Contact Attempt | 100 to 2400 | 2600 to 5000 | 5100 to 10,000 | 10,100 to 25,000 | 25,000 to 99,900 | 100,000 and over |
| First | 52.0 | 51.9 | 49.0 | 41.6 | 48.8 | 51.3 |
| Second | 38.8 | 48.6 | 43.5 | 51.7 | 55.6 | 53.3 |
| Third | 36.4 | 58.8 | 32.4 | 33.3 | 28.8 | 28.5 |
| Fourth | 40.9 | 50.0 | 23.8 | 17.6 | 17.6 | 0.0 |

Adult Indian Education Project
Norman, Oklahoma 1976

research, an analysis was undertaken to examine the most effective utilization of field interviewer efforts. Briefly stated, this analysis showed that ~~85 percent of all completed interviews were obtained in either the first or the second contact attempt~~. In addition, of all contacts that did require a third or fourth attempt, only 31 percent resulted in a completed interview. Eighty-seven (87.2) percent of the name and address inaccuracies were discovered on the first contact attempt. As Table 4-04 shows, the actual effectiveness of utilizing a third and fourth contact attempt varies among town size.

### 4.13 Reaction and Comments on the Interview

Field interviewers were instructed to briefly list all reactions they had to the respondent and the interviewing situation shortly after they completed the interview. This information was written on the questionnaire itself in a section entitled Thumb-Nail Sketch. Appendix 4-11 provides a summary of these reactions and the frequency of their occurrence. In addition, field interviewers were asked to record all comments made by the respondents to the interviewing process or any particular question and to list any comments they had about the way in which the respondent had answered the questions. A summary of these comments is presented in Appendix 4-12.

## 4.2 Characteristics of the Adult Indian in Oklahoma

### 4.21 Personal and Social

As discussed in Section 2.23, the personal and social factors surveyed as a part of the A.I.E.P. included: sex, age, marital status, county and town of residence and organizational involvement. In addition, the survey examined the extent to which the adults were counted as part of the 1970 census.

Sex, age and marital status. Forty-four and six-tenths [redacted] of the adult Indian population in the state of Oklahoma [redacted] and [redacted] percent were [redacted] as indicated by this survey. Table 4-06 shows the age distribution of this population. This table shows a fairly equal distribution among age groups. The range of ages was from 18 to 102 although the number of respondents interviewed over 70 was dramatically lower then for other age groups. There were approximately the same number of men and women among the various age groups though there were [redacted] among those persons interviewed who were between [redacted].

The largest group of those people interviewed were married, 60.1 percent. Table 4-05 shows a complete distribution of respondents' marital status.

TABLE 4-05

RESPONDENT'S MARITAL STATUS

| Category | N | % |
|---|---|---|
| Married | 414 | 60.1 |
| Separated | 29 | 4.2 |
| Divorced | 56 | 8.1 |
| Widowed | 94 | 13.6 |
| Never Married | 89 | 12.9 |
| No Answer | 7 | 1.0 |
| Total | 689 | 100.0 |

## TABLE 4-06

## DISTRIBUTION OF RESPONDENTS AGE

| Years | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| 16 - 20 | 49 | 7.5 | 7.5 |
| 21 - 25 | 63 | 9.6 | 17.1 |
| 26 - 30 | 60 | 9.2 | 26.3 |
| 31 - 35 | 57 | 8.8 | 35.1 |
| 36 - 40 | 61 | 9.4 | 44.5 |
| 41 - 45 | 59 | 9.1 | 53.6 |
| 46 - 50 | 55 | 8.5 | 62.1 |
| 51 - 55 | 37 | 5.7 | 67.8 |
| 56 - 60 | 45 | 6.9 | 74.7 |
| 61 - 65 | 55 | 8.5 | 83.2 |
| 66 - 70 | 46 | 7.1 | 90.3 |
| 71 - 75 | 27 | 4.2 | 94.5 |
| 76 - 80 | 17 | 2.6 | 97.1 |
| 81 - 85 | 9 | 1.4 | 98.5 |
| 86 - 90 | 6 | 0.9 | 99.4 |
| 91 - 95 | 0 | 0.0 | 99.4 |
| over 95 | 4 | 0.6 | 100.0 |
| age not given | 39 | | |
| | 689 | 100.0 | |

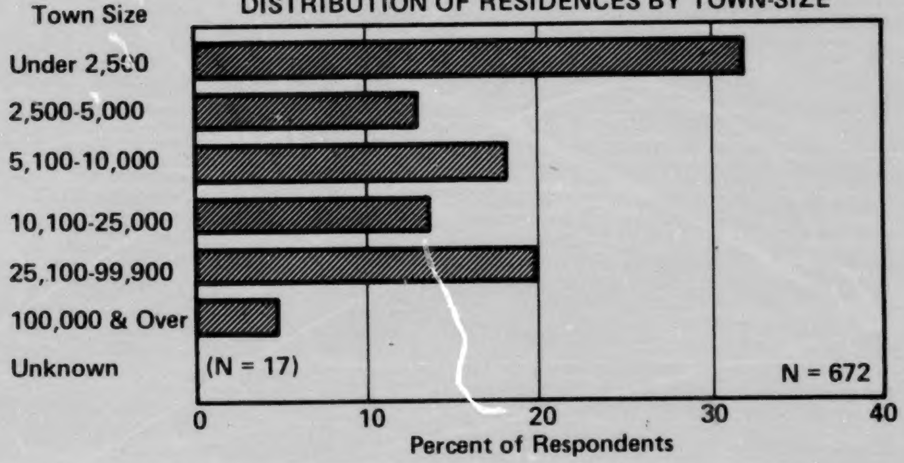
Adult Indian Education Project
Norman, Oklahoma 1976

In those tribes involving respondents taken from a household membership list, there were an average of 1.8 adult Indians eligible to be interviewed residing in the household.

Town-size and county distribution. Figure 4-07 shows the size of town within which the adult Indians in Oklahoma reside.

FIGURE 4-07

DISTRIBUTION OF RESIDENCES BY TOWN-SIZE



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Towns of less than 100,000 population (the first five categories listed) were considered to be rural or town residences. Since the population figures used for this survey were those of the actual town-size rather than statistical metropolitan service areas (SMSA's), Tulsa and Oklahoma City were the only areas considered as urban areas. There were 4.5 percent of the survey respondents living in these urban areas. This is somewhat lower than was reflected in the sample frame (11.4) as shown in Appendix 4-01. This reflected the difficulty in locating respondents and interviewers in urban areas. This urban figure is discussed in more detail in Addendum B. Within the five categories used to break down the town-size residence of the rural and town population, by far the largest percentage of people resided in areas having less than 2,500 people.

FIGURE 4-08

COUNTY DISTRIBUTION OF RESPONDENTS

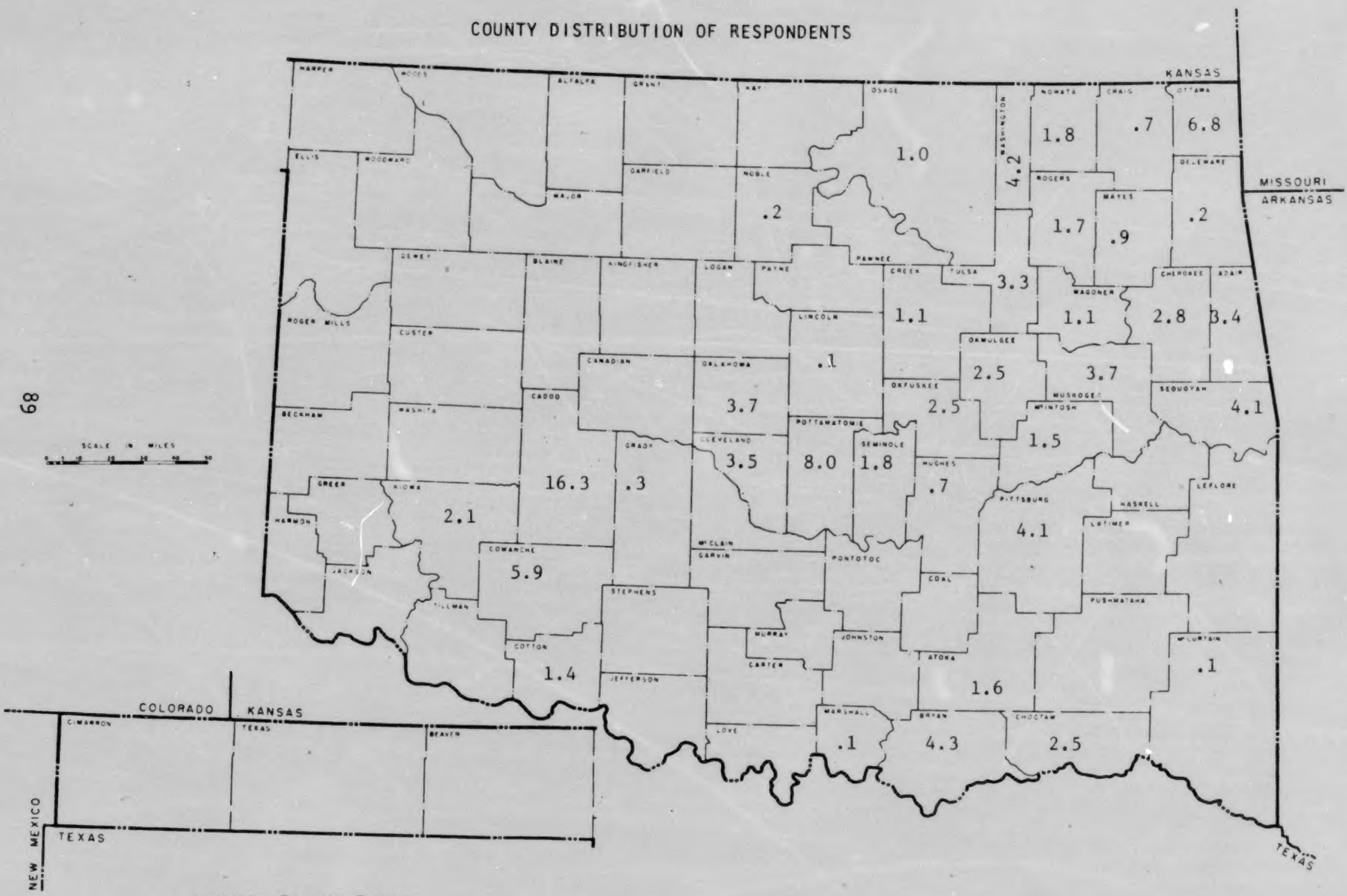

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Figure 4-08 shows the county distribution of those people completing the survey. The [redacted] within the survey was in the [redacted]. It should be noted that because [redacted] in the survey, the distribution shown for this survey was not identical with the actual distribution of the Indian population within the state as shown by BIA figures.

Counted by Bureau of Census. Respondents were asked whether or not they had reported themselves as an Indian on the 1970 census. As the table below shows, about two-thirds of the respondents interviewed responded to this question and about 13 percent of those who did respond did not know or did not remember whether they had reported themselves as an Indian. Those people who did remember included [redacted] who [redacted] that [redacted]. This figure is mirrored in the discrepancies in population estimates shown in Addendum B.

TABLE 4-09

RESPONDENTS REPORTED AS AN INDIAN ON THE 1970 CENSUS

| Response | Frequency | Percent Responding* | Percent Who Remembered+ |
|---|---|---|---|
| Yes | 322 | 70.3 | 80.7 |
| No | 77 | 16.8 | 19.3 |
| Don't know | 59 | 12.9 | |
| Question not asked | 95 | | |
| No answer | 136 | | |
| Total | 689 | 100.0 | 100.0 |

*N=458 +N=399

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An analysis was run to determine whether those people, who were excluded from the 1970 census count, had lower Indian blood quantum and therefore were perhaps more likely to report themselves as non-Indian. As Table 4-10 indicates, this was clearly not the case. There was a fairly equal distribution for the responses across blood quantum. In addition it

## TABLE 4-10

## RESPONDENTS REPORTED AS AN INDIAN ON THE 1970 CENSUS

## BY BLOOD QUANTUM

| Response | 4/4 % | 3/4 to 4/4 % | 1/2 to 3/4 % | 1/4 to 1/2 % | Less than 1/4 % | Row Total % |
|---|---|---|---|---|---|---|
| Yes | 28.9 | 13.0 | 15.2 | 18.1 | 24.8 | 100.0 |
| No | 33.8 | 12.2 | 16.2 | 12.2 | 25.7 | 100.0 |
| Don't Know | 27.1 | 5.1 | 5.1 | 25.4 | 37.3 | 100.0 |

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should be kept in mind that most of the respondents had been listed on tribal membership lists probably well before the time of the 1970 census, which indicates their identification with the Indian community.

Two possible interpretations remained. One interpretation, consistent with the research presented in Section 2.31, suggested that ~~Native Americans were more hesitant to participate and provide accurate responses~~ for research being done by someone (i.e., Bureau of Census) ~~who was not from within the Indian community~~. The second interpretation was that a ~~significant portion of the Indian community was excluded from the 1970 census altogether~~.

In examining this second interpretation further, researchers working on this survey sought out the experience of other Indian and non-Indian researchers within the state. The general impression of the researchers contacted was that the Bureau of Census acknowledges the inadequacy of the census statistics for the Indian community. However, even beyond this, a survey by an Indian rights organization for one of the counties in Oklahoma shortly after the 1970 census indicated that, for that county, there was a 250 percent error in the reported Indian population.*

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* Actual figures provided by the Tillman County Indian Rights Association indicated over 860 American Indians in Tillman County in 1971 whereas Bureau of Census showed 233 in that county in 1970.

The major reason given for this discrepancy was the Indian people were just not counted in the census. They were never contacted by a census person, and if contacted by mail, often did not complete and return the census form because it was not viewed as relevant to their own interests. Though the dramatic difference in the count of American Indians reported in Tillman County was not indicated statewide, there were clearly far more Indians in the state than available figures indicated. A more detailed discussion of population estimates can be found in Addendum B.

Organizational affiliation. Respondents were asked to list community and organizational groups with which they were affiliated and their interests and hobbies. The responses to these questions and the frequency of the response are listed in Appendixes 4-08, 4-09, and 4-10. An index of respondent involvement was constructed based on number of community, organizational and tribal groups in which the respondent was involved. Up to two responses for each of these questions were recorded. Therefore, the index of involvement contained values from 0 to 6. Table 4-11, shown below, indicates the results of this analysis.

TABLE 4-11

INDEX OF RESPONDENT INVOLVEMENT IN TRIBAL AND COMMUNITY ORGANIZATIONS

| Number of Organizational Involvements | Frequency | Percent | Cummulative Percent |
|---|---|---|---|
| 0 | 208 | 30.2 | 30.2 |
| 1 | 229 | 33.2 | 63.4 |
| 2 | 139 | 20.2 | 83.6 |
| 3 | 65 | 9.4 | 93.0 |
| 4 | 39 | 5.7 | 98.7 |
| 5 | 8 | 1.2 | 99.9 |
| 6 | 1 | 0.1 | 100.0 |
| Total | 689 | 100.0 | |

## 4.22 Tribal Characteristics

Contact results among tribes. Table 4-13 shows the results of contact attempts and completed interviews among the 19 tribes participating in this survey. Overall, the number of respondents from within each tribe participating in this state survey was, generally, equal to the ratio of persons in that tribe to the Indian population in the state as a whole. Under three percent of the respondents reported a tribal affiliation different from the one from which their name was taken.

Blood Quantum. Table 4-12 shows the results of the survey question asking the respondent how much Indian blood they have.

TABLE 4-12

BLOOD QUANTUM: HOW MUCH INDIAN BLOOD?

| Blood Quantum | N | % * |
|---|---|---|
| 4/4 | 268 | 39.7 |
| 3/4 to 4/4 | 66 | 9.8 |
| 1/2 to 3/4 | 100 | 14.8 |
| Less than 1/4 | 102 | 15.1 |
| Don't Know | 6 | |
| No Answer | 8 | |
| Total | 689 | 100.0 |

*N=675

Adult Indian Education Project
Norman, Oklahoma 1976

Each tribe was allowed to specify who among their Indian people they consider tribal members and thus potential respondents for the purpose of this study. In several cases, membership lists included members who could have less

## TABLE 4-13

## CONTACT ATTEMPTS AND COMPLETED INTERVIEWS ACROSS TRIBE

| Tribe | Attempted to Contact | Not in the Sample | In the Net Sample N | In the Net Sample % | Proportion of Sample to Frame | Completed Interviews N | Completed Interviews % |
|---|---|---|---|---|---|---|---|
| Kiowa | 196 | 68 | 118 | 14.5 | 4.4 | 108 | 15.7 |
| Comanche | 124 | 42 | 82 | 9.3 | 2.9 | 65 | 9.4 |
| Apache | 12 | 1 | 11 | 1.2 | 4.2 | 11 | 1.6 |
| Caddo | 14 | 3 | 11 | 1.2 | 1.9 | 1 | .1 |
| Western Delaware | 15 | 2 | 13 | 1.5 | 3.0 | 13 | 1.9 |
| Potawatomi | 58 | 20 | 38 | 4.3 | 2.1 | 24 | 3.5 |
| Kickapoo | 15 | 0 | 15 | 1.7 | 5.8 | 15 | 2.2 |
| Absentee Shawnee | 52 | 10 | 42 | 4.7 | 12.8 | 30 | 4.4 |
| Cherokee | 444 | 219 | 225 | 25.5 | 1.6 | 148 | 21.5 |
| Creek | 76 | 12 | 64 | 7.2 | .5 | 54 | 7.8 |
| Choctaw | 187 | 75 | 112 | 12.7 | 1.8 | 95 | 13.8 |
| Eastern Shawnee | 30 | 13 | 17 | 1.9 | 2.6 | 16 | 2.3 |
| Miami | 22 | 4 | 18 | 2.0 | 3.9 | 18 | 2.6 |

than one-quarter Indian blood in that tribe. Consequently, these people were included for this survey though the Bureau of Indian Affairs excludes them from Bureau services. However, as this table indicates, nearly 80 percent of those persons surveyed had one-quarter Indian blood or more. In short, this indicated the adults within the Indian community being served by the tribes are for the most part members of the Indian community even according to the more stringent blood quantum definition. Again, these issues are discussed in more detail in Addendum B.

As Table 4-14 shows, the percentage of Indian people with varying degrees of Indian ancestry at least among the tribes in Oklahoma was not very different within different age groups.

Indian spouses. As mentioned in Section 4.21, 60 percent of the respondents were married. Fifty-one percent (51.6) of these married respondents were married to Indian spouses, 47 percent of whom were members of the same tribe as the respondent.

| Tribe | Attempted to Contact | Not in the Sample | In the Net Sample N | In the Net Sample % | Proportion of Sample to Frame | Completed Interviews N | Completed Interviews % |
|---|---|---|---|---|---|---|---|
| Peoria | 4 | 0 | 4 | .5 | 1.3 | 4 | .6 |
| Quapaw | 38 | 11 | 27 | 3.1 | 6.4 | 23 | 3.3 |
| Wyandotte | 28 | 21 | 7 | .8 | .9 | 7 | 1.0 |
| Seneca-Cayuga | 12 | 2 | 10 | 1.1 | 6.2 | 9 | 1.3 |
| Ottawa | 21 | 10 | 11 | 1.2 | 7.3 | 7 | 1.0 |
| Seminole | 56 | 20 | 36 | 4.1 | 1.0 | 27 | 3.9 |
| Other Tribal Affiliations | 14 | — | 14 | 1.6 | — | 14 | 2.0 |
| TOTAL | 1,418 | 533 | 885 | 100.0 | 1.8 | 689 | 100.0 |

## TABLE 4-14

### DISTRIBUTION OF BLOOD QUANTUM BY AGE GROUPS
(Percentage Within Age Group)

| Respondent's Age | 4/4 | 3/4 to 4/4 | 1/2 to 3/4 | 1/4 to 1/2 | Less than 1/4 | Row Total |
|---|---|---|---|---|---|---|
| 18-35 years | 39.1 | 9.3 | 17.8 | 13.8 | 20.0 | 100.0 |
| 36-55 years | 48.3 | 11.1 | 14.0 | 11.6 | 15.0 | 100.0 |
| 56 years and older | 36.6 | 8.3 | 13.7 | 19.5 | 22.0 | 100.0 |

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Tribal language and preference. Thirty-six and two-tenths (36.2) percent of the adults surveyed speak at least some of their tribal language.

## TABLE 4-15

### NUMBER OF ADULTS SPEAKING TRIBAL LANGUAGE BY AGE GROUPS

| Respondent's Age | Speak Tribal Language |  | Do Not Speak Tribal Language |  | Row Total |
|---|---|---|---|---|---|
|  | N | % | N | % | N |
| 18-35 years | 48 | 24.0 | 152 | 76.0 | 200 |
| 36-55 years | 88 | 46.1 | 103 | 53.9 | 191 |
| 56 years and older | 84 | 43.2 | 110 | 56.7 | 194 |

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As Table 4-15 shows, there are noticeably fewer persons ages 18-35 years who can speak their tribal language than persons older than 35. Overall, 32.4 percent of adult Indians preferred their tribal language to English; however, among the people who were able to speak some of their tribal language, over 47 percent preferred this language to English

Sources of information and tribal events. Respondents were asked where they got most of their news about current tribal events. The results shown below show overwhelmingly that the principal method of communication within the Indian community was the newspaper and talking with people.

TABLE 4-16

SOURCES OF INFORMATION ABOUT TRIBAL EVENTS

| Source | First Response | Second Response | N | Total Percent* |
|---|---|---|---|---|
| Radio | 43 | 25 | 68 | 7.9 |
| Newspaper | 269 | 56 | 325 | 37.8 |
| Television | 71 | 33 | 104 | 12.1 |
| Talking to People | 235 | 51 | 286 | 33.3 |
| All | 11 | 2 | 13 | 1.5 |
| Other | 35 | 21 | 56 | 6.5 |
| None | 8 | - | 8 | .9 |
| | 689 | | | 100.0 |

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**Norman, Oklahoma 1976**

*N=860

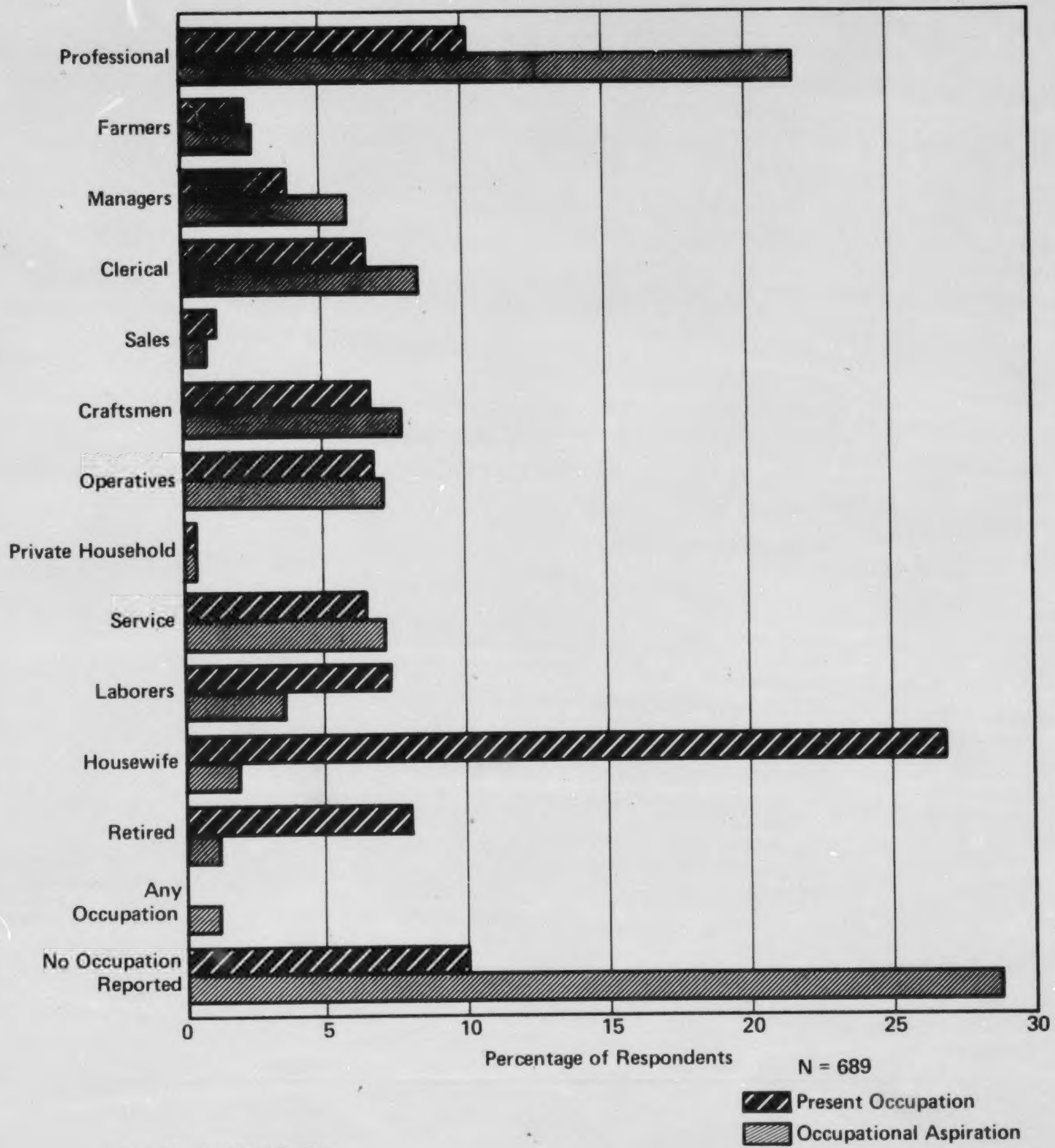
Respondents also were asked what tribal events they participated in. The list of these tribal events and the frequency they were indicated is shown in Appendix 4-07.

## 4.23 Employment Characteristics

Occupation. Respondents were asked to list their current occupation. The list of these occupations and the frequency they were mentioned is

## FIGURE 4-17

## DISTRIBUTION OF RESPONDENT'S OCCUPATIONS BY OCCUPATIONAL GROUP



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given in full in Appendix 4-05. Figure 4-17 shows these occupations broken into Bureau of Census occupational groups and the number of people working within each of the occupational groups.

*Occupational aspiration*. As part of the survey, respondents were asked to provide the name of the job they would most like to apply for. This question then was an indicator of the respondents' occupational aspirations. These have been listed in Appendix 4-06 and are compared to actual occupations in Figure 4-17.

*Job satisfaction and job mobility*. Respondents were asked two questions concerning job satisfaction and job mobility.

Q 45. Does this kind of occupation make full use of your training and experience?

1. ___ Yes
2. ___ No
3. ___ Don't know
4. ___ No answer

Q 46. What are the number of jobs you have held in the last 10 years?

1. __________
2. ___ Don't know
3. ___ No Answer

As a measure of job satisfaction, nearly thirty percent (28.8) of the respondents said their present occupation did not make full use of their training. Table 4-18 shows the number of jobs that respondents have held in the last ten years.

*Family income*. The income distribution of American Indian families living in the state of Oklahoma is shown in Figure 4-19. The median income is approximately $484 per month, which is equal to $5,808 per year. This is consistent with figures reported by the Bureau of Census after inflation for the intervening years has been taken into account. (U. S. Bureau of Census, 1972)

## TABLE 4-18

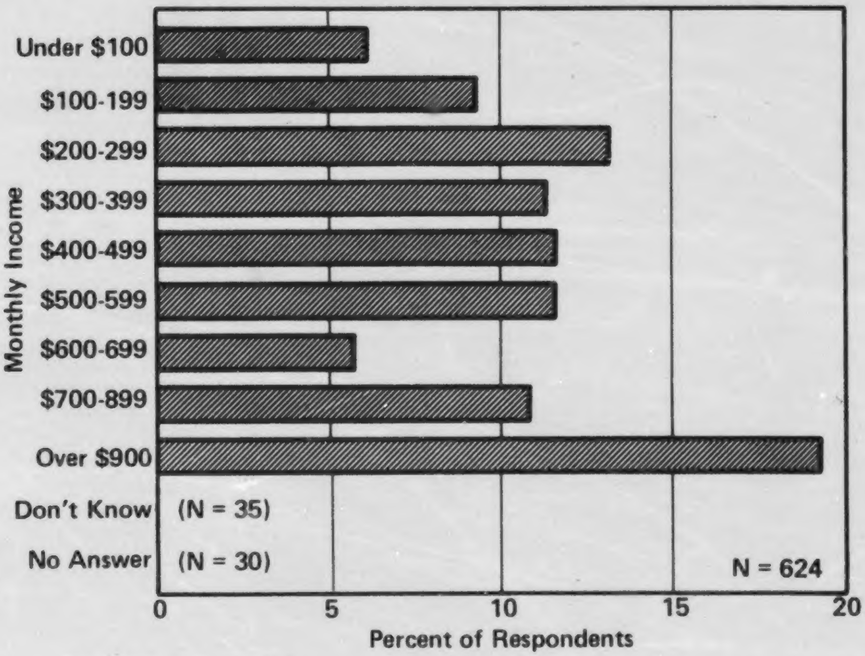
## NUMBER OF JOBS HELD IN THE LAST TEN YEARS

| Number of Jobs | N | % * |
|---|---|---|
| 0 | 114 | 17.8 |
| 1 | 203 | 31.6 |
| 2 | 107 | 16.7 |
| 3 | 89 | 13.9 |
| 4-5 | 81 | 12.6 |
| 6 or more | 48 | 7.5 |
| Don't know | 24 | |
| No answer | 23 | |
| Total | 689 | 100.0 |

*N=642

FIGURE 4-19

DISTRIBUTION OF RESPONDENT'S INCOME



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## 4.3 Educational Attainment

Eight questions were asked in order to survey educational attainment among adult Indians. These questions measure attainment in two areas: (1) extent and type of school completed and (2) post-secondary education and training. A summary of the educational attainment characteristics of adult Indians in Oklahoma is shown in Figure 4-21.

### 4.31 Extent and Type of Schooling

Years of school completed. Respondents were asked to give the highest grade of school that they had completed. Table 4-20 shows the distribution of years of school attained. Fifty-one and seven-tenths ~~(51.7) percent of the adult Indians in the state of Oklahoma had not completed high school~~ and ~~less than six percent indicated that they were college graduates~~. Section 4.51 provides a comparison of grade completion figures from this research to those reported by the Bureau of Census.

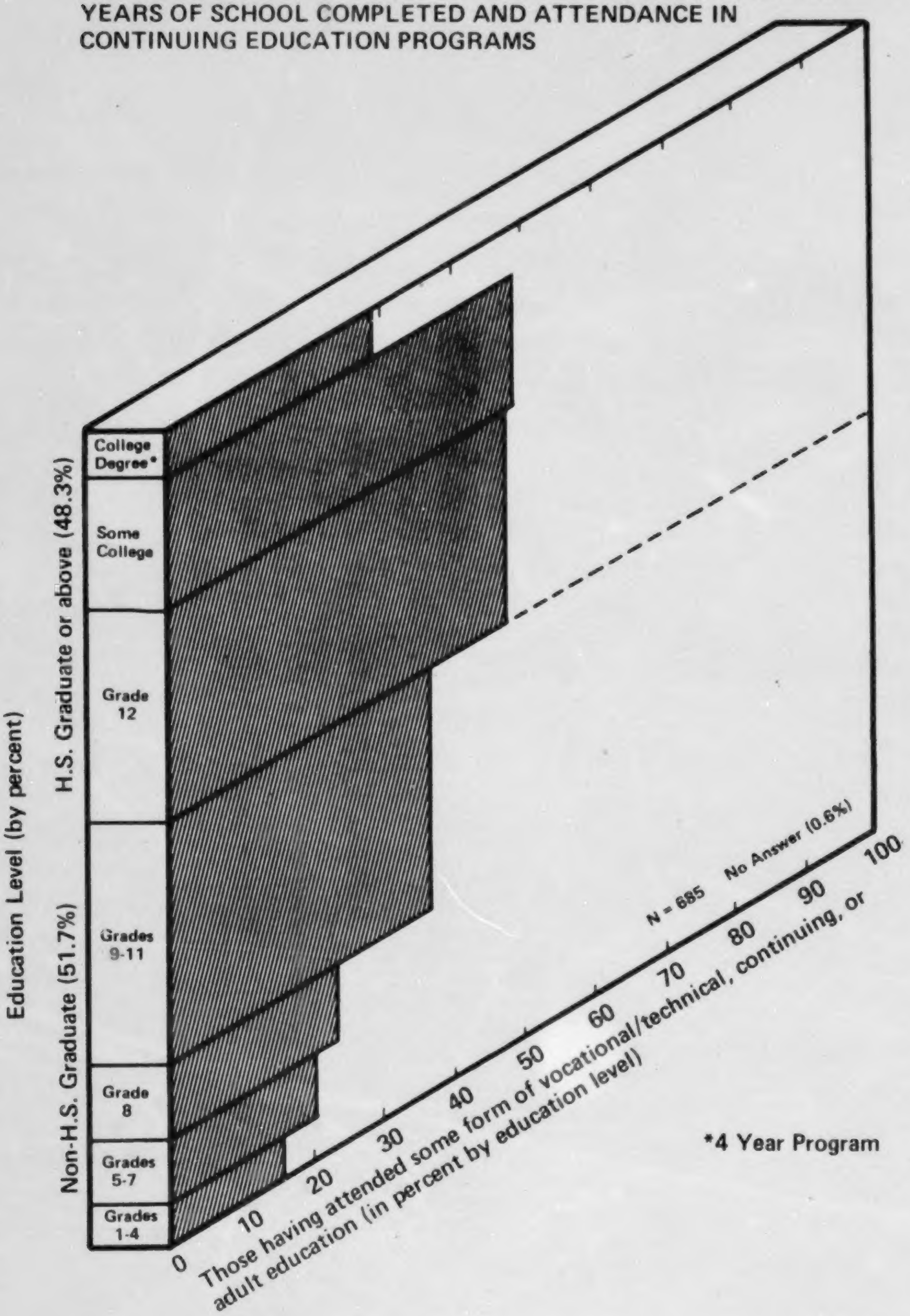
TABLE 4-20

YEARS OF SCHOOL COMPLETED

| Years of School | Frequency | Percent* | Cummulative Percent |
|---|---|---|---|
| Grades 1-4 | 35 | 5.1 | 5.1 |
| Grades 5-7 | 57 | 8.3 | 13.4 |
| Grade 8 | 65 | 9.5 | 22.9 |
| Grades 9-11 | 197 | 28.8 | 51.7 |
| High School Graduate | 177 | 25.8 | 77.5 |
| Some College | 116 | 16.9 | 94.5 |
| College Graduate + | 40 | 5.5 | 100.0 |
| No Answer | 4 | | |
| Total | 689 | 100.0 | |

*N=685 +4 year program

FIGURE 4-21 SUMMARY OF EDUCATIONAL CHARACTERISTICS: YEARS OF SCHOOL COMPLETED AND ATTENDANCE IN CONTINUING EDUCATION PROGRAMS



*4 Year Program

Type of certificate received. Another way in which this survey examined high school completion was by asking respondents what type of high school certificate they had received - a high school diploma or an equivalence test certificate. Forty-eight percent indicated they had received a high school diploma and an additional 5.7 percent indicated that they had passed a high school equivalence test. This brings the figure for high school completion to just over 53 percent but leaves over 46 percent who have not received either. This is compared to the 68.7 percent reported for the state population as a whole (Oklahoma State Department of Education, News Release, Sunday, March 18, 1973)

Type of school attended. Table 4-22 shows whether the respondents attended BIA or public school. The majority attended public schools or mostly public schools. Yet 18.6 percent did attend BIA schools.

TABLE 4-22

TYPE OF SCHOOL ATTENDED

| Type of School | N | % |
|---|---|---|
| BIA | 106 | 15.6 |
| Mostly BIA | 21 | 3.1 |
| Both or Neither | 52 | 7.6 |
| Mostly Public | 22 | 3.2 |
| Public | 480 | 70.5 |
| No Answer | 8 | |
| Total | 689 | 100.0 |

Adult Indian Education Project
Norman, Oklahoma 1976

### 4.32 Post-Secondary Education

Table 4-23 shows a breakdown of the number of years of college which respondents have had and Table 4-24 shows the type of college degree

## TABLE 4-23

## LAST GRADE IN COLLEGE COMPLETED

| Last Grade | Frequency | Percent | Percent Attending College |
|---|---|---|---|
| Senior and Degree | 38 | 5.5 | 24.7 |
| Junior | 21 | 3.1 | 13.6 |
| Sophomore or A.A. | 38 | 5.5 | 24.7 |
| Freshman | 55 | 8.0 | 35.7 |
| Less than 1 year | 2 | 0.3 | 1.3 |
| None | 531 | 77.5 | |
| No Answer | (4) | | |
| Total | 689 | 100.0 | 100.0 |

Adult Indian Education Project
Norman, Oklahoma 1976

## TABLE 4-24

## TYPE OF COLLEGE DEGREE OBTAINED

| Type of Degree | Frequency | Percent Obtaining Degree |
|---|---|---|
| Medical | 1 | 2.0 |
| M.A. | 6 | 12.0 |
| B.A. or B.S. | 28 | 56.0 |
| A.A. or Equivalent Two Years | 12 | 24.0 |
| Other | 3 | 6.0 |
| Total | 50 | 100.0 |

7.3% of overall population
32.5% of those attending college

Adult Indian Education Project
Norman, Oklahoma 1976

obtained, for those who went to college.

Related figures, published by the Chronical of Higher Education (November 8, 1976) for the 1974 student enrollment show that of the Indian students enrolled in undergraduate programs in the nation, 11.1 percent are enrolled in Oklahoma Colleges and Universities. They comprise 4.3 percent of the total undergraduate enrollment in the state.

Respondents were asked whether they had had any other schooling such as technical, vocational, adult education or continuing education. Of those people responding, ~~37 percent~~ said they had ~~had some type of education~~ other than college ~~after leaving school~~. Figure 4-21 shows a more detailed analysis of the educational characteristics of this 37 percent. Appendix 4-03 provides a list and frequency of the names and types of other schooling and training that other respondents attended and Appendix 4-04 lists the agencies or groups which provided that training.

## 4.4 Functional Literacy

Twenty-nine indicators were created to survey literacy among the adult Indians in Oklahoma. (See Appendix 2-3.) As discussed above in Section 1.42, the A.I.E.P. used the term "functional literacy" to more adequately measure literacy skills required of adults to function on a day-to-day basis. These literacy skills often involved comprehension of social knowledge that extended beyond mere reading skills. As a result, the indicators discussed below could be more appropriately termed measures of functional competence as they examine a variety of skills necessary for an adult to be considered competent at functioning within contemporary American society.

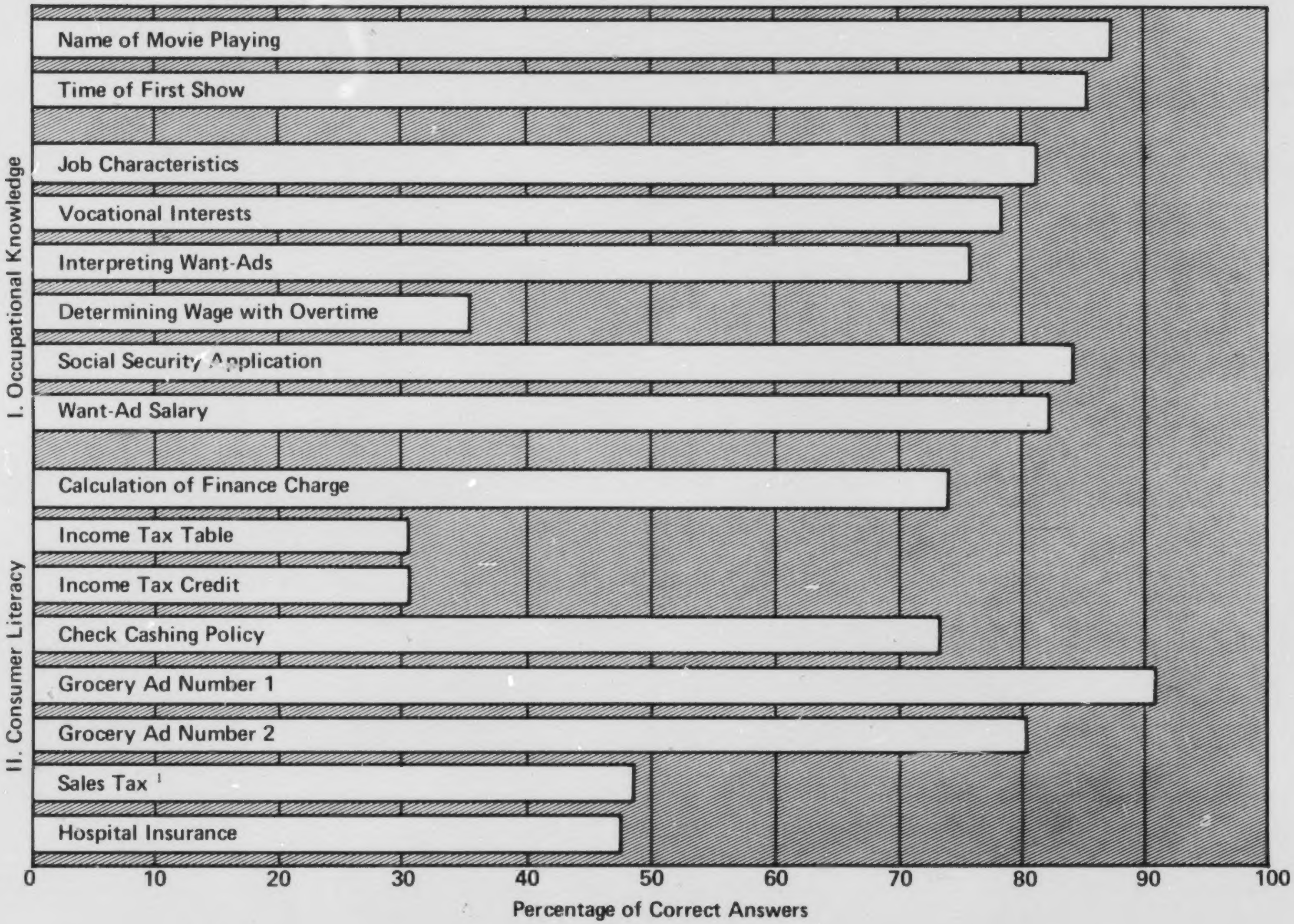
The survey was designed in case study format; that is, questions were asked from the point of view of a typical Native American family, Joe and Ellen Bigcrow. The literacy questions referred to everyday reading materials that were then shown to respondents. An analysis of the results included a review of the results for these indicators and an analysis of the indexes composed to assess adult functional competence.

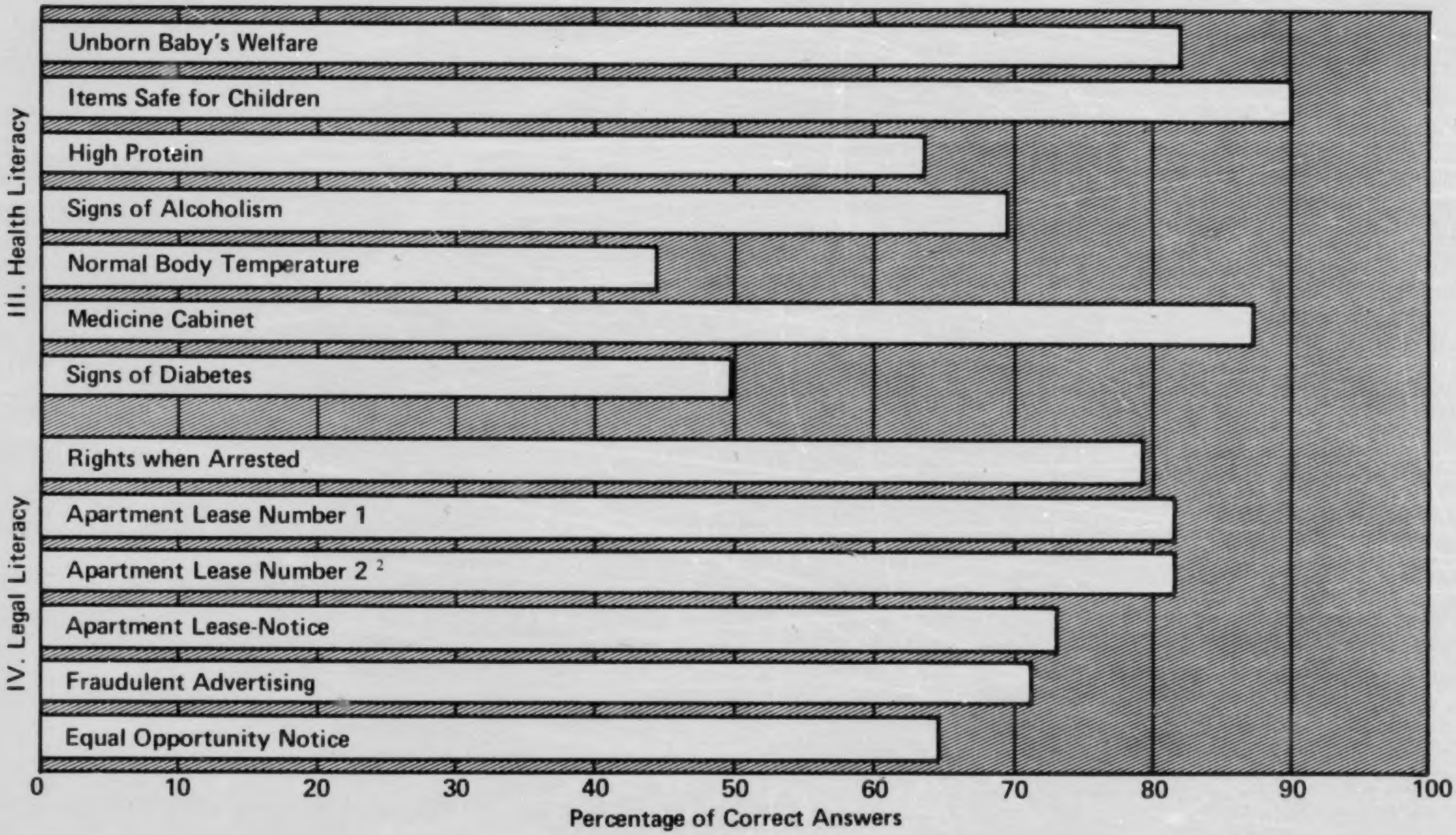
### 4.41 Overall analysis.

Three modes of analysis were used to examine the performance on literacy indicators. These were (1) an analysis of the individual indicators, (2) an analysis of overall respondent performance within each of the literacy areas and (3) an assessment at the competency level at which respondents were functioning.

Indicators - overall. Six-hundred and severnty-eight (678) adult Native Americans answered the literacy portion of this survey. Forty-nine adults or [redacted] indicated that they ~~could not read~~ or could not see, at all, example reading ~~materials shown to them~~. A summary of the scores on the individual literacy indicators appears in Figure 4.25.

FIGURE 4-25 SUMMARY OF RESULTS FOR LITERACY INDICATORS





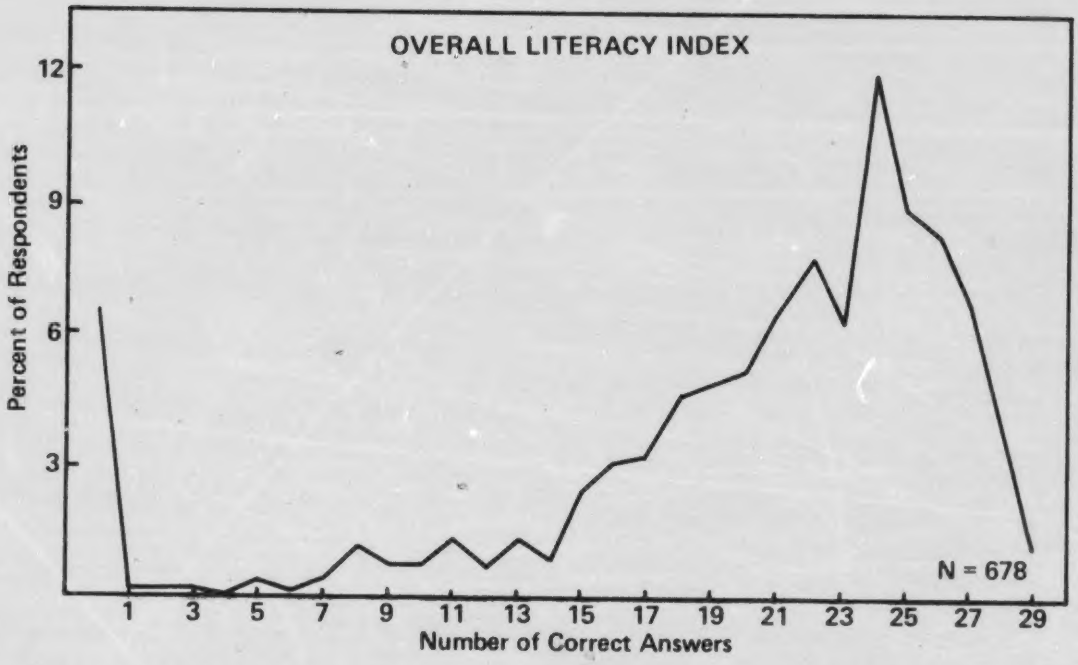
N = 678

[1] 33 Missing Observations

[2] 37 Missing Observations

Adult Indian Education Project
Norman, Oklahoma 1976

FIGURE 4-26

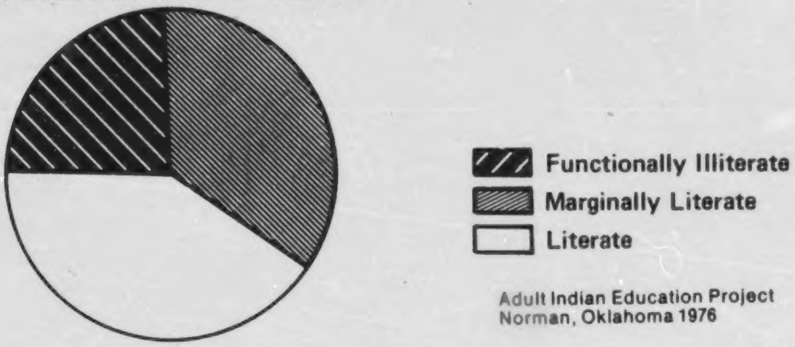


Adult Indian Education Project
Norman, Oklahoma 1976

Indexes of literacy - overall. A total score for all 29 literacy indicators was tabulated for each respondent in order to assess his/her overall literacy or functional competency. The distribution of these scores is displayed in figure 4-26.

Competency levels - overall. As part of the assessment and analysis of the extent of literacy among adult Indians in the state of Oklahoma, the overall literacy ability of the respondents was analyzed in terms of functional competency levels. Criterion points were set dividing respondents into three competency groups. Those persons who were able to answer correctly 80 percent of the indicator questions were considered functionally literate; those persons who were not able to answer 80 percent of the indicator questions correctly, but were able to answer 60 percent or more, were considered marginally literate; and those who were not able to answer 60 percent of the indicator questions correctly were considered functionally illiterate. The result of this analysis for the overall literacy scores is shown graphically by this figure.

FIGURE 4-27
OVERALL COMPETENCY LEVELS



Adult Indian Education Project
Norman, Oklahoma 1976

## 4.42 Topic Areas

As discussed earlier, there were four topic areas included in the survey of functional literacy among adult Indians in Oklahoma. These were: occupational knowledge, consumer literacy, health literacy and legal literacy.

First questions. The first two indicators included in the survey was community resource indicators which refer to a movie advertisement from a local newspaper. Respondents were asked to read the name of the movie showing at the theater and to identify the time of the first movie show. The results were as follows:

| | |
|---|---|
| Naming a movie from a newspaper ad | 87.5% right<br>12.5% wrong |
| Identifying time of the first movie show | 85.4% right<br>14.6% wrong |

Occupational knowledge. Six indicators were created to survey literacy as it relates to occupational knowledge. (a) Respondents were shown a clipping of the want-ad section of the local newspaper and asked two questions pertaining to those employment ads. (b) Respondents were asked two questions about selecting jobs, one based on vocational test scores and one based on personal and family conditions. (c) On another question, respondents were given the details of how much a member of the case-study family earned per hour and how many hours they worked in a certain week; and then were asked to calculate the weekly wages. (d) Finally, the respondents were asked to read a social security application and provide the correct information which would have been written in on one of the lines of that application. The results were as follows:

| | |
|---|---|
| Matching job and personal characteristics | 80.1% right<br>19.9% wrong |
| Matching vocational test results and job | 78.6% right<br>21.4% wrong |
| Responding to help wanted ads | 75.8% right<br>24.2% wrong |
| Determining salary from a help wanted ad | 82.3% right<br>17.7% wrong |
| Determining amount of wages with overtime | 35.5% right<br>64.5 wrong |
| Completing a social security application | 84.1% right<br>15.9% wrong |

These results show that while around 80 percent of the adult Indians in Oklahoma were able to perform most of the indicator tasks associated with occupational knowledge only 35 percent were able to figure weekly wages involving overtime. The large discrepancy in the scores was striking.

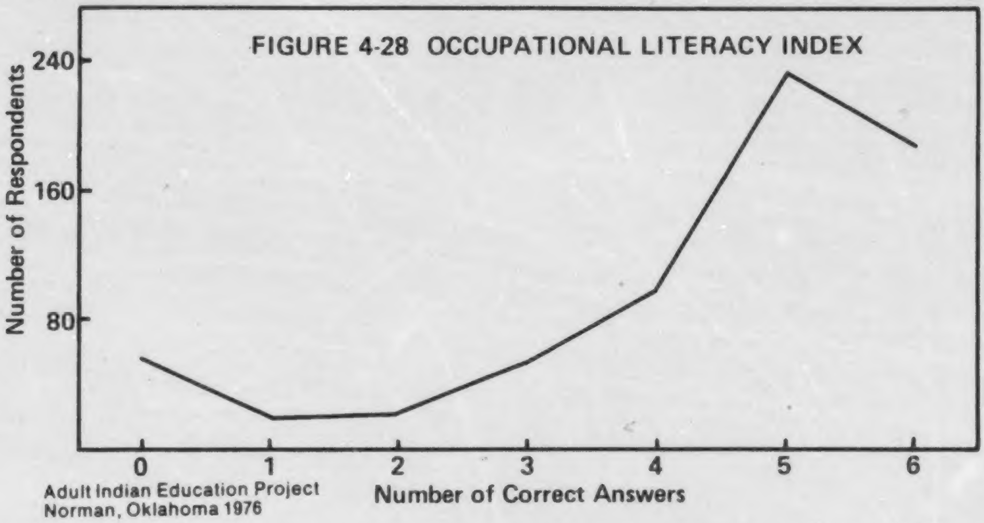


FIGURE 4-28 OCCUPATIONAL LITERACY INDEX

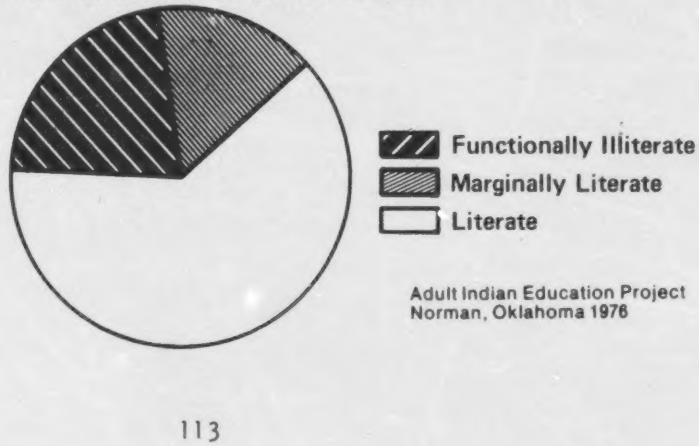
Adult Indian Education Project
Norman, Oklahoma 1976

Each respondent's total score was tabulated for all of the questions relating to occupational knowledge. The graph above shows the results of this occupational knowledge index for the adult Indian population as a whole.

The occupational literacy scores were analyzed according to three competency levels using the 60 percent and 80 percent criterion points discussed above:

FIGURE 4-29

OCCUPATIONAL COMPETENCY LEVELS



Adult Indian Education Project
Norman, Oklahoma 1976

Figure 4-29 shows the division of respondents into occupational knowledge competence groups.

Consumer literacy. Eight indicators were constructed to survey the extent of consumer literacy among adult Indians: (a) Respondents were given the cost and finance charge for an automobile and asked to figure the number of monthly payments. (b) Respondents were asked to answer two questions to help fill in blanks on an income tax return. (c) Respondents were asked to determine how much would be charged to cash a check according to a sign displayed in a grocery store. (d) Respondents were asked to answer two questions concerning items shown in a grocery store advertisement from a local newspaper. (e) Respondents were asked to total a list of five number which were the sales taxes paid on a certain day. (f) Finally, respondents were asked to provide the name of an agency who would help a member of the case study family make sure that they were not being overcharged for a radio in a local store. The results are as follows:

| | |
|---|---|
| Calculating cost and finance charge | 74.3% right<br>26.7% wrong |
| Completing an income tax return - tax tables | 30.7% right<br>69.3% wrong |
| Completing an income tax return - tax credits | 30.8% right<br>69.2% wrong |
| Determining check cashing policy | 73.9% right<br>26.1% wrong |
| Interpreting newspaper grocery ad | 91.0% right<br>9.0% wrong |
| Identifying items within grocery ad | 80.1% right<br>19.9% wrong |
| Determining amount paid in sales tax | 48.8% right<br>51.2% wrong |
| Reporting agency for consumer assistance | 71.4% right<br>28.6% wrong |

Each respondent's total score was tabulated for all of the questions relating to consumer literacy. The graph below shows the results of this consumer literacy index for the adult Indian population as a whole.

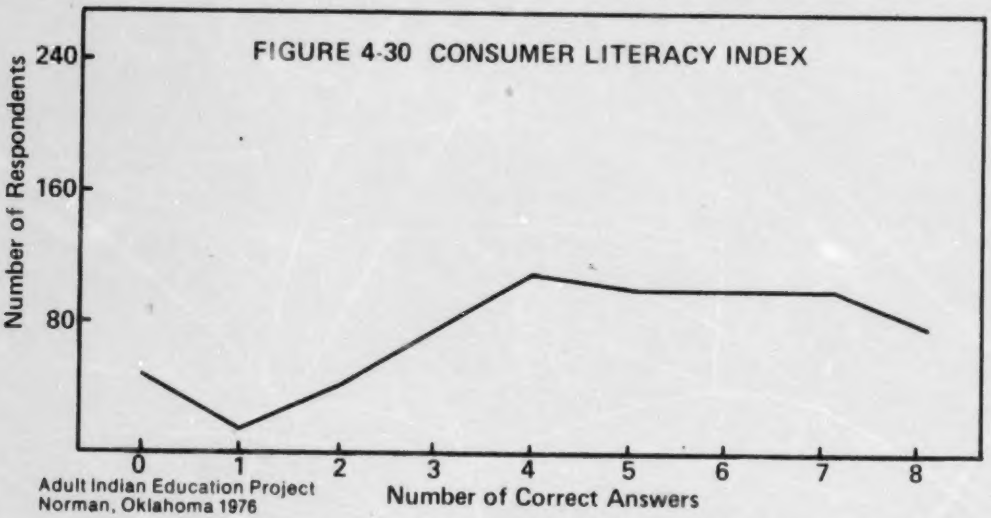


FIGURE 4-30 CONSUMER LITERACY INDEX

Adult Indian Education Project
Norman, Oklahoma 1976

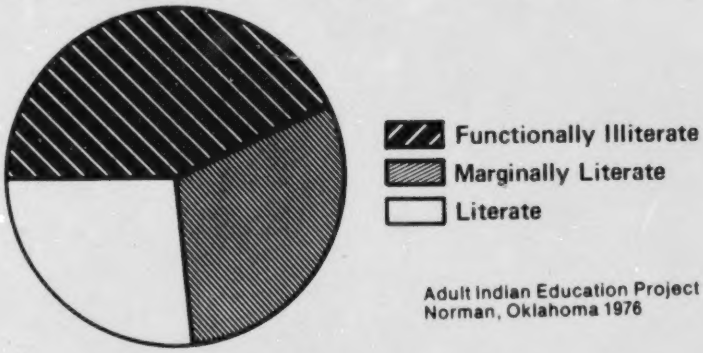
The consumer literacy results shown indicated extreme variations among the different consumer questions. On one hand 80 and 90 percent of the adults successfully answered two of the newspaper ad questions. However, only 30 percent were able to answer either of the income tax questions. These two particular questions involved the multiplication of $30 x 3, and looking up a number in a table of numbers. It is not uncommon to find these literacy tasks in other daily consumer situations, and Indian adults generally do not have the requisite skills.

In a closely related issue respondents were asked to add a series of five two-digit numbers and greater than 50 percent were unable to do so successfully. This was a strong and clear indication that adults within the Indian communities in Oklahoma lack even minimal consumer skills such as the handling of money. It is these consumer skills which are linked in the mainstream of American society most directly to acquisition and retention of resources necessary for purchase of basic survival needs such as food, clothing and shelter.

As shown by the figure below, 42.8 percent of adult Native Americans lack the skills necessary to function as a consumer within contemporary

American society. Another 30.4 percent were only marginally competent at consumer skills. The consumer literacy scores were analyzed according to three competency levels:

FIGURE 4-31 CONSUMER COMPETENCY LEVELS



Adult Indian Education Project
Norman, Oklahoma 1976

Health literacy. Seven literacy indicators were constructed to survey health literacy. Respondents were asked to (a) identify a protein food from a food list; (b) identify a sign of alcoholism from a list of possible signs; (c) provide two symptoms of diabetes (a critical health issue among American Indians); (d) identify the normal human body temperature; (e) identify appropriate items for a medicine cabinet; (f) identify an item, which would not endanger an unborn baby's welfare, from a list of possible items; and (g) identify an item safe for children from a list of possible items. The results were as follows:

| | |
|---|---|
| Determining protein food from food list | 63.7% right<br>36.3% wrong |
| Selecting from list of alcoholism signs | 69.8% right<br>30.2% wrong |
| Identifying signs of diabetes (only one required) | 49.9% right<br>50.1% wrong |
| Identifying normal human body temperature | 44.1% right<br>55.9% wrong |
| Identifying items in a medicine cabinet | 87.9% right<br>12.1% wrong |

| | |
|---|---|
| Identifying items endangering unborn baby's welfare | 82.0% right<br>18.0% wrong |
| Identifying items safe for children | 90.0% right<br>10.0% wrong |

Each respondent's total score was tabulated for all the questions relating to health literacy. The graph below shows the results of this health literacy index for the adult Indian population as a whole.

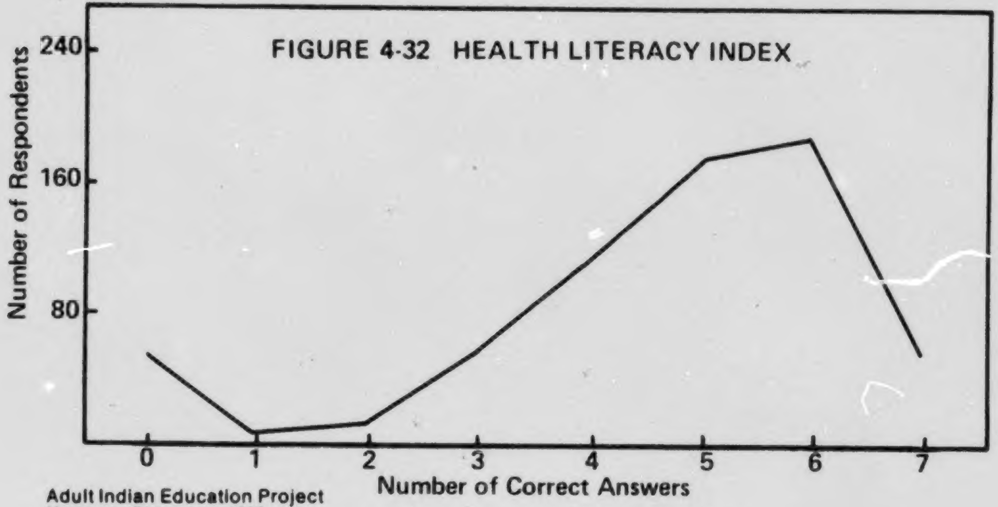


FIGURE 4-32 HEALTH LITERACY INDEX

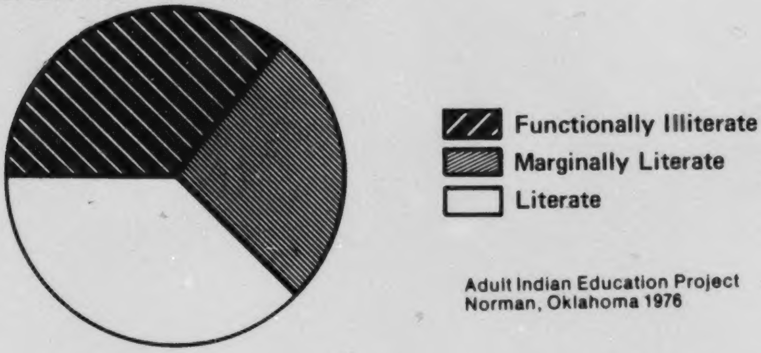
Adult Indian Education Project
Norman, Oklahoma 1976

The literacy outcomes for health literacy, even more than consumer literacy, showed a broad range of performance levels. Less than half of the adults know the normal human body temperature or were able to identify one symptom of diabetes (80 percent were unable to identify two symptoms). These figures were a sharp contrast to those showing that 90 percent of the adults surveyed could identify items unsafe for children. Through another indicator nutrition seemed a serious Indian health problem by the question indicating that over 35 percent of the adults did not know which foods were high protein foods.

Figure 4-33 illustrates that a total of over 62 percent of the adults surveyed do not have the necessary skills to respond to health problems which are of major concern to the American Indian community.

FIGURE 4-33

HEALTH COMPETENCY LEVELS



Adult Indian Education Project
Norman, Oklahoma 1976

Legal literacy. Six indicators were constructed to survey legal literacy. The indicator questions involved reading and interpreting an equal opportunity notice, a benefits statement from a health insurance policy, a simple apartment lease and identifying what civil rights a person has when arrested. The results were as follows:

| | |
|---|---|
| Interpreting an equal opportunity notice | 64.6% right<br>35.4% wrong |
| Interpreting health insurance policy | 47.9% right<br>52.1% wrong |
| Knowledge of civil rights when arrested | 79.2% right<br>20.8% wrong |
| Interpreting apartment lease #1 | 81.7% right<br>18.3% wrong |
| Interpreting apartment lease #2 | 81.9% right<br>18.1% wrong |
| Interpreting apartment lease - notice | 73.3% right<br>26.7% wrong |

Each respondent's total score was tabulated for all of the questions relating to legal literacy. The graph below shows the results of this legal literacy index for the Indian adult population as a whole.

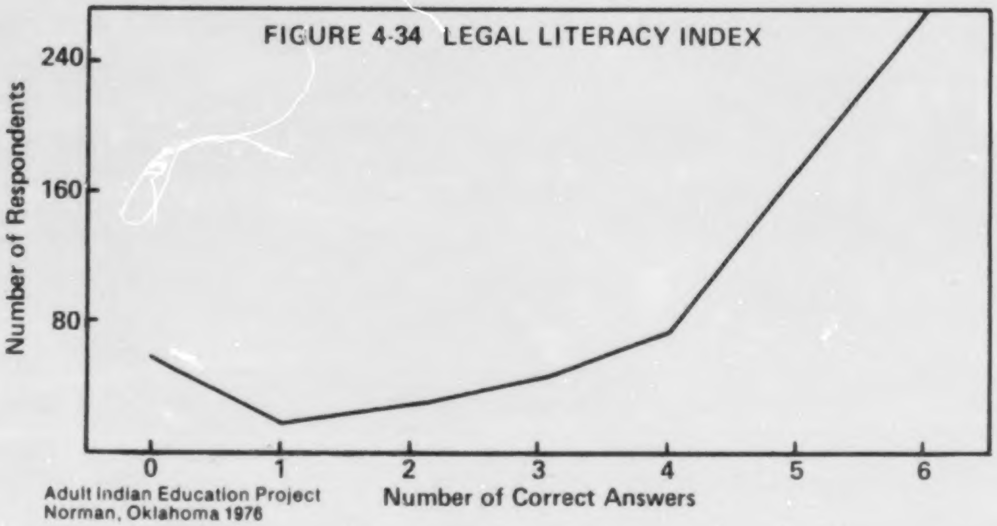


FIGURE 4-34 LEGAL LITERACY INDEX

Adult Indian Education Project
Norman, Oklahoma 1976

Legal literacy as measured by the indicators above seemed, for the most part, to be a skill that around 70 percent of the Indian adults possessed. The primary exception to this was again a question involving computation skills. Respondents were shown this brief statement of insurance benefits.

> NON-MEMBER HOSPITAL BENEFITS
>
> When any participant is admitted as a bedpatient to a Non-member Hospital, this insurance will provide benefits equal to 75% of the total value of the benefits that would have accrued if the same care had been furnished by a Member Hospital. For in-patient care in Member Hospitals, this insurance will pay the full daily cost. For out-patient care, the benefits are the same for both Member and Non-member Hospitals.

They were then asked the following question:

Joe and Ellen Bigcrow have recently taken out a car and medical insurance policy as is shown below.

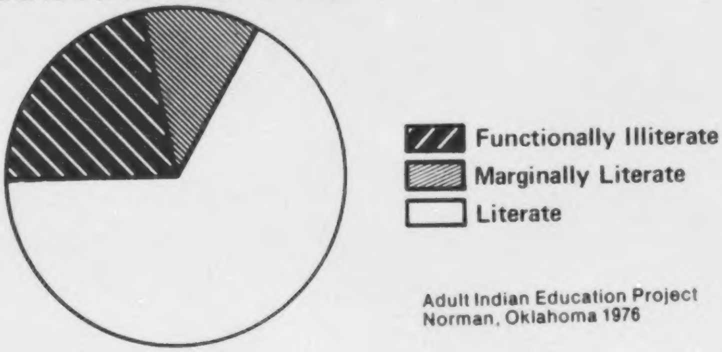
(CARD 5) Q 6. If Joe Bigcrow is admitted to a non-member hospital as a bed patient, how much of the cost will he have to pay himself?

1. ____________________
2. ___ Don't know
3. ___ No answer

Less than 50 percent of the adults were able to successfully answer this question.

When analyzing legal literacy skills in terms of competency levels, almost two-thirds of the Indian adults were assessed to be functionally competent as this figure shows:

FIGURE 4-35
LEGAL COMPETENCY LEVELS



Adult Indian Education Project
Norman, Oklahoma 1976

### 4.43 Skills Indexes

In addition to the four topic indexes (summarized om Figure 4-37), the 29 literacy indicators were divided into four types of reading and comprehension skills. These were skills requiring the ability to: (1) read and interpret newspapers; (2) read and figure computation problems; (3) read and complete forms; and (4) read and interpret signs. The distributions for the scores in these skill areas are shown in Table 4-38. Indexes were developed within each of the skill areas. Figure 4-37 shows the indexed scores for these four areas. There was a clear and dramatic difference among these literacy skills. The largest portion of adult Native Americans were able to complete all six questions requiring the reading and comprehension of newspapers. This finding was consistent with the high proportion of the Indian community who reported newspapers as their primary source of tribal news. However, the largest portion of the adults could not answer more than half of the computation questions. Both of these extremes exceeded the conditions found in the four topic areas discussed above.

## TABLE 4-36

## ANALYSIS OF INDICATORS BY SKILL AREAS

| Newspaper | Percent Answering Correctly |
|---|---|
| Name of Movie Playing | 87.5 |
| Time of First Show | 85.4 |
| Want-Ad Salary | 82.3 |
| Interpreting Want-Ads | 75.8 |
| Grocery Ad #1 | 91.0 |
| Grocery Ad #2 | 80.1 |

| Computation | Percent Answering Correctly |
|---|---|
| Calculation of Finance Charge | 74.3 |
| Hospital Insurance | 47.9 |
| Determining Wage with Overtime | 35.5 |
| Income Tax-Tables | 30.7 |
| Income Tax-Credit | 30.8 |
| Sales Tax | 48.8[o] |

| Signs | |
|---|---|
| Check Cashing Policy | 73.9 |
| Signs of Alcoholism | 69.8 |
| Equal Opportunity Notice | 64.6 |
| Rights When Arrested | 79.2 |

| Forms | |
|---|---|
| Income Tax-Tables | 30.7 |
| Income Tax-Credit | 30.8 |
| Apartment Lease #1 | 81.7 |
| Apartment Lease #2 | 81.9[+] |
| Apartment Lease-Notice | 73.3 |
| Social Security Application | 84.1 |

N = 678

[+] 33 Missing Observations

[o] 37 Missing Observations

FIGURE 4-37

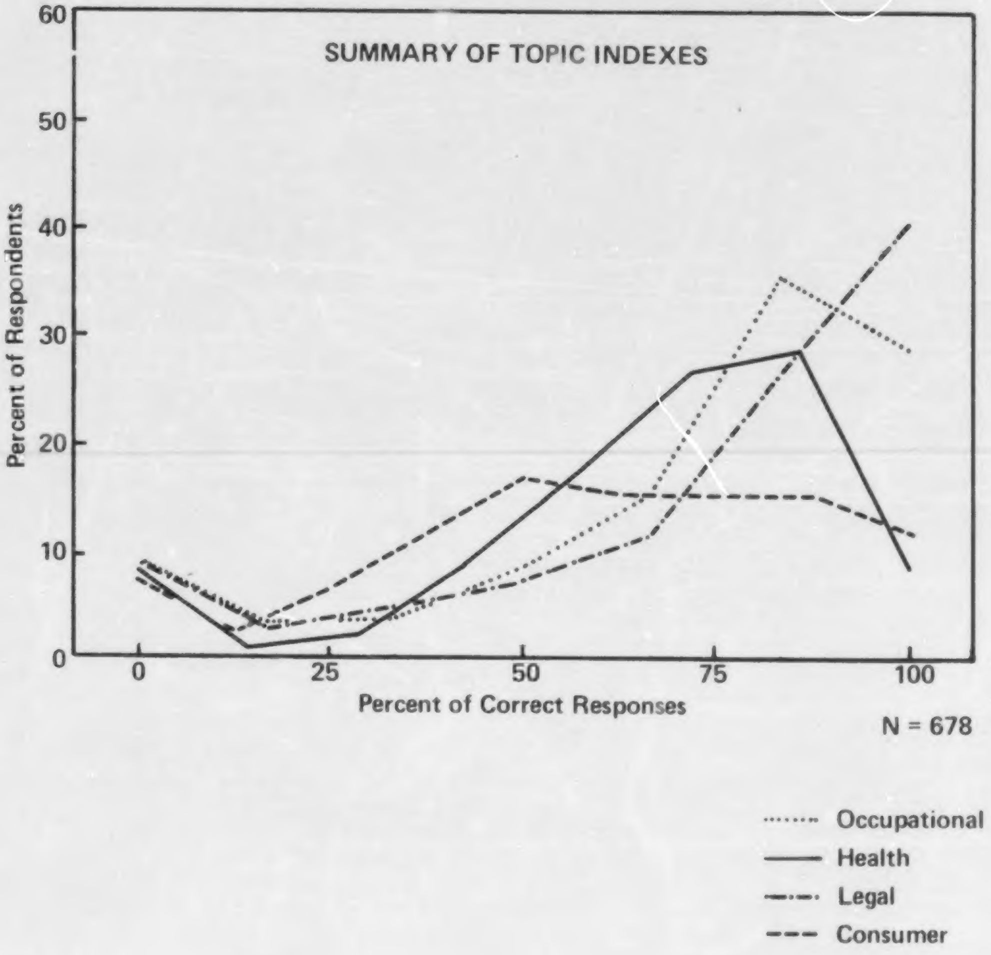
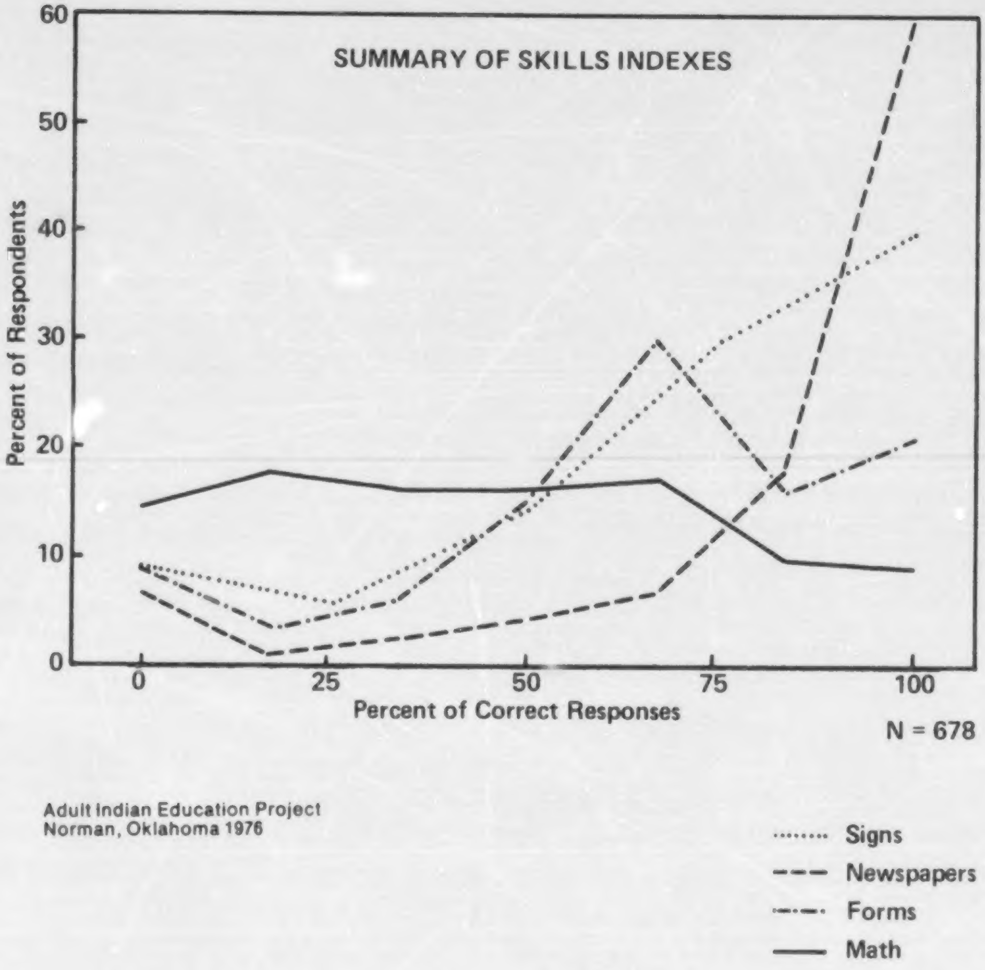

SUMMARY OF TOPIC INDEXES
Percent of Respondents
0
10
20
30
40
50
60
0
25
50
75
100
Percent of Correct Responses
N = 678
Occupational
Health
Legal
Consumer

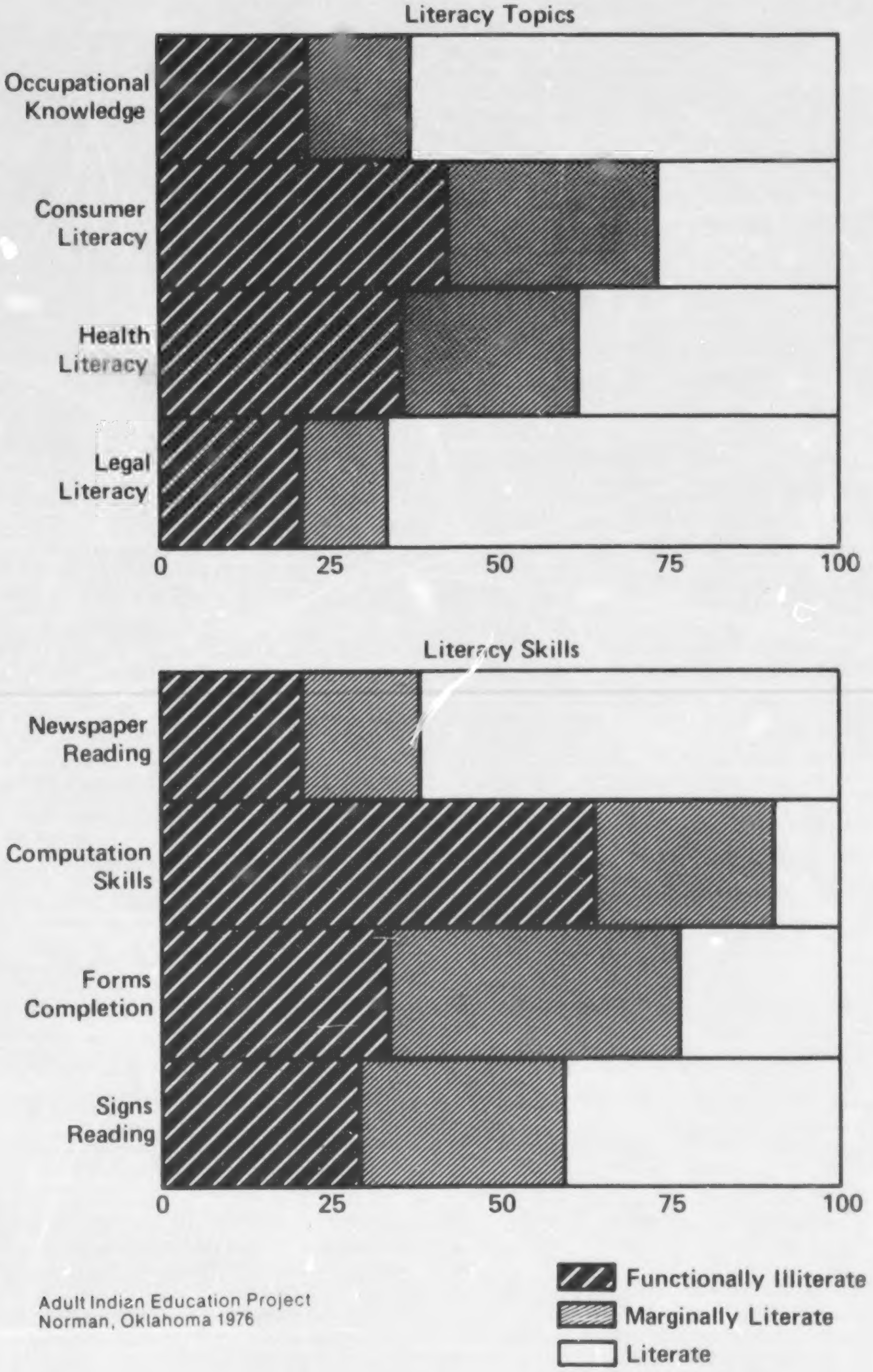
FIGURE 4-38



Adult Indian Education Project
Norman, Oklahoma 1976

FIGURE 4-39

SUMMARY OF COMPETENCY LEVELS



Adult Indian Education Project
Norman, Oklahoma 1976

## 4.44 Summary of Illiteracy

Each of the eight topics and skills discussed above addressed a separate area of reading tasks. Figure 4-39 shows a summary of competency levels for both the topic and skill areas. Clearly, the illiteracy rate was high among adult Indians in Oklahoma depending on what type of topic or skill was being measured. The illiteracy rate exceeded 20 percent of the population in all areas. Yet within the computation and consumer literacy areas, the illiteracy rate was noticeably higher. In fact over 80 percent of adult Indians were not fully competent in the computation area, and over 60 percent of adult Indians were not fully competent in either the consumer or health areas. Figure 4-40 provides a fuller assessment of what this actually meant in terms of numbers of Indian adults in Oklahoma.

What this figure does not show is how many people were literate in one area but illiterate in another. Nor does it show how many of the adults were illiterate in several areas. However, Figure 4-41 does provide an analysis of this cross-relationship among types of literacy. Over 56 percent of the adults were illiterate in one or more areas. This alarmingly high illiteracy rate is compounded by the fact that only 14 percent are literate in all four functional literacy areas.

## 4.45 Additional Indicator Data

The respondents were separated into two groups based upon their total literacy score for the 29 items (at the median score). Performance by both groups was then tabulated for each question. Table 4-42 shows the results of this analysis. Generally speaking, the more difficult the question, overall, the greater the difference between the halves. A correlation was also run between each of the individual test items and the overall test scores. These correlations are shown in Table 4-43.

TABLE 4-40

SUMMARY TABLE

ESTIMATED NUMBERS OF ILLITERATE ADULTS WITHIN THE SEPARATE LITERARY AREAS*

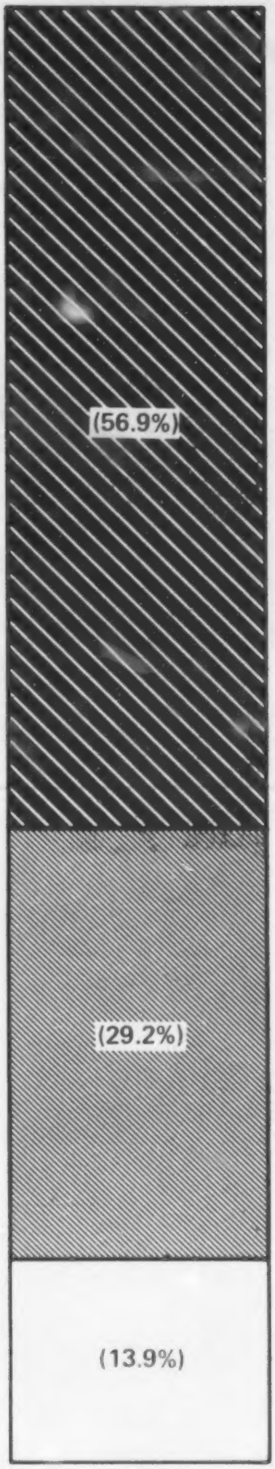
| Topic Areas | Functionally Illiterate | Marginally Literate | Total N | Total % |
|---|---|---|---|---|
| Occupational Literacy | 14,030 | 9,520 | 23,550 | 37.1 |
| Consumer Literacy | 27,170 | 19,300 | 46,470 | 73.2 |
| Health Literacy | 22,860 | 16,700 | 39,360 | 62.3 |
| Legal Literacy | 13,840 | 7,050 | 20,890 | 32.9 |
| **Skill Areas** | | | | |
| Newspaper Reading | 13,200 | 11,430 | 24,630 | 39.8 |
| Computation | 40,130 | 10,790 | 50,920 | 80.2 |
| Forms Completion | 21,400 | 19,490 | 40,890 | 63.8 |
| Sign Reading | 18,480 | 19,360 | 37,840 | 59.6 |
| **Overall Competency** | 15,050 | 22,480 | | |

* Based on an estimated adult population of 63,490 (See Addendum B)

Adult Indian Education Project
Norman, Oklahoma 1976

FIGURE 4-41

TOTAL ESTIMATED NUMBER OF ILLITERATE ADULTS ACROSS ALL LITERARY TOPIC AREAS*



Illiterate in:

| | |
|---|---|
| 4 Areas | 8,250 |
| 3 Areas | 4,760 |
| 2 Areas | 7,430 |
| 1 Area | 15,750 |
| TOTAL | 36,190 |

Not illiterate in any area but marginally literate in:

| | |
|---|---|
| 4 Areas | 250 |
| 3 Areas | 1,140 |
| 2 Areas | 5,970 |
| 1 Area | 11,110 |
| TOTAL | 18,470 |

Literate in:

| | |
|---|---|
| All 4 Areas | 8,830 |

*Based on estimated adult population of 63,490 (See Addendum B).

Adult Indian Education Project
Norman, Oklahoma 1976

## TABLE 4-42

## PERCENT OF CORRECT ANSWERS

## ITEM DIFFICULTY BY UPPER AND LOWER HALVES*

| Question | Lower % | Upper % | Total % Correct | % Difference |
|---|---|---|---|---|
| Name of Movie Playing | 73.4 | 98.9 | 87.5 | 25.5 |
| Time of First Show | 71.8 | 96.5 | 85.4 | 24.7 |
| I. Occupational Knowledge | | | | |
| Job Characteristics | 62.3 | 94.6 | 80.1 | 32.3 |
| Vocational Interests | 58.0 | 95.4 | 78.6 | 37.4 |
| Interpreting Want-Ads | 52.8 | 94.6 | 75.8 | 41.8 |
| Determining Wage with Overtime | 8.5 | 57.6 | 35.5 | 49.1 |
| Social Security Application | 68.5 | 96.8 | 84.1 | 28.3 |
| Want-Ad Salary | 62.3 | 98.7 | 82.3 | 36.4 |
| II. Consumer Literacy | | | | |
| Calculation of Finance Charge | 55.4 | 89.8 | 74.3 | 34.4 |
| Income Tax-Tax Table | 3.3 | 53.1 | 30.7 | 49.8 |
| Income Tax-Tax Credit | 5.9 | 51.2 | 30.8 | 45.3 |
| Check Cashing Policy | 50.5 | 93.0 | 73.9 | 42.5 |
| Grocery Ad #1 | 80.7 | 99.5 | 91.0 | 18.8 |
| Grocery Ad #2 | 59.0 | 97.3 | 80.1 | 38.3 |
| Sales Tax | 15.7 | 74.7 | 48.8 | 59.0 |
| Hospital Insurance | 19.3 | 71.3 | 47.9 | 52.0 |

| Question | Lower % | Upper % | Total % Correct | % Difference |
|---|---|---|---|---|
| III. Health Literacy | | | | |
| Unborn Baby's Welfare | 64.3 | 96.5 | 82.0 | 32.2 |
| Items Safe for Children | 78.0 | 99.7 | 90.0 | 21.7 |
| High Protein | 46.6 | 77.7 | 63.7 | 31.1 |
| Signs of Alcoholism | 49.8 | 86.1 | 69.8 | 36.3 |
| Normal Body Temperature | 20.3 | 63.5 | 44.1 | 43.2 |
| Medicine Cabinet | 73.8 | 99.5 | 87.9 | 25.7 |
| Signs of Diabetes | 38.0 | 59.5 | 49.9 | 21.5 |
| IV. Legal Literacy | | | | |
| Rights when Arrested | 56.9 | 97.3 | 79.2 | 40.4 |
| Apartment Lease #1 | 64.6 | 95.7 | 81.7 | 31.1 |
| Apartment Lease #2 | 62.3 | 97.2 | 81.9+ | 34.9 |
| Apartment Lease-Notice | 47.9 | 94.1 | 73.3 | 46.2 |
| Fraudulent Advertising | 48.5 | 90.1 | 71.4 | 41.6 |
| Equal Opportunity Notice | 39.0 | 85.5 | 64.6 | 46.5 |

* N = 678
+ 33 Missing Observations
o 37 Missing Observations

## TABLE 4-43

## CORRELATIONS OF INDIVIDUAL TEST ITEMS TO TOTAL TEST SCORE

| | CORRELATIONS |
|---|---|
| Name of Movie Playing | .71 |
| Time of the First Show | .65 |
| **I Occupational Knowledge** | |
| Job Characteristics | .67 |
| Vocational Interests | .70 |
| Interpreting Want-Ads | .68 |
| Determining Wages with Over-time | .48 |
| Social Security Application | .68 |
| Want-Ad Salary | .73 |
| **II Consumer Literacy** | |
| Calculation of Finance Charge | .58 |
| Income Tax - Tables | .49 |
| Income Tax - Credit | .47 |
| Check-cashing Policy | .64 |
| Grocery Ad #1 | .74 |
| Grocery Ad #2 | .71 |
| Sales Tax | .57 |
| Hospital Insurance | .55 |
| **III Health Literacy** | |
| Unborn Baby's Welfare | .66 |
| Items Safe for Children | .77 |
| High Protein | .48 |
| Signs of Alcoholism | .54 |
| Normal Body Temperature | .48 |
| Medicine Cabinet | .76 |
| Signs of Diabetes | .18 |
| **IV Legal Literacy** | |
| Rights when Arrested | .68 |
| Apartment Lease #1 | .67 |
| Apartment Lease #2 | .71 |
| Apartment Lease-Notice | .68 |
| Fraudulent Advertising | .60 |
| Equal Opportunity Notice | .58 |

## 4.5 Comparative Data

The survey results presented above documented the extent of both the illiteracy and educational attainment of adult Native Americans in Oklahoma. The educational needs of these adults, on the whole, seemed fairly numerous and extended into virtually every area of day-to-day activities. However, in order to fully assess the severity of these needs in the context of the larger society, the survey results had to be compared to previous research for this and other population groups. Initially an analysis was made comparing the results of this survey with the population estimates and educational attainment data currently available for the Indian population within Oklahoma. Second, a comparison was made between the survey instrument and results from this study and those of previous national functional literacy studies. Finally, the functional literacy results among the state Indian population was compared to the results from a pilot test of the same instrument among a non-Indian population.

### 4.51 Comparison to Previous Research

Estimated population. The 1970 Bureau of Census Subject Report on the American Indian (1973) estimated the total Oklahoma Indian population, all ages, was 96,803. The Bureau of Indian Affairs 1972 resident Indian population report estimated the total Indian population in Oklahoma was 99,228. However, research done during this survey of literacy and education for adult Indians in the state of Oklahoma indicated that the Indian population for the state of Oklahoma was 115,800. This meant that there were over 16,000 more Indians than we had previously supposed. The social and economic implications of this finding extend far beyond the field of education. Addendum B details how this estimate was made and how it corrected inadequacies in the two previous estimates. For several reasons, this new estimate was still considered to be, itself, an underestimation, but there was no adequate way to determine the actual extent of underestimation.

## TABLE 4-44

## YEARS OF SCHOOL COMPLETED

## 25 YEARS AND OLDER

| Years of School | State Total Population (Bureau of Census) |  | Indian State Population (Bureau of Census)+ |  | Indian State Population (A.I.E.P.) |  |
|---|---|---|---|---|---|---|
|  | N | % | N | % | N | % |
| 0 | 17,322 | 1.2 | 1,375 | 3.0 | 34 | 5.8 |
| 1-4 | 62,209 | 4.4 | 4,087 | 8.9 |  |  |
| 5-7 | 148,219 | 10.4 | 6,940 | 15.1 | 56 | 9.5 |
| 8 | 191,828 | 13.5 | 6,000 | 13.1 | 62 | 10.5 |
| 9-11 | 269,159 | 18.9 | 10,447 | 22.7 | 174 | 29.4 |
| 12 | 426,577 | 30.0 | 11,163 | 24.3 | 141 | 23.9 |
| 13-15 | 164,711 | 11.6 | 3,894 | 8.5 | 87 | 14.7 |
| 16 or more | 142,544 | 10.0 | 2,025 | 4.4 | 33 | 5.6 |
| TOTAL | 1,422,569 | 100.0 | 45,931 | 100.0 | 587<br>(54,090) | 100.0 |
| Median years of school | 12.1 |  | 10.3 |  | 11.4 |  |
| Percentage of High School Graduates | 51.5 |  | 37.2 |  | 44.2 |  |

+Total Oklahoma Indian Population All Ages

Bureau of Census 96,803 AIEP 115,800

Adult Indian Education Project
Norman, Oklahoma 1976

Years of school completed. Table 4-44 shows the comparison of the findings of the Adult Indian Education Project to the Bureau of Census figures on the years of school completed for persons 25 years and older. The A.I.E.P. figures reflected fewer Indian people dropped out of grades one through eight than was indicated by the Bureau of Census. However, according to the A.I.E.P. survey there were more people who dropped out at the high school level than the census figures reflect; 29.4 percent compared to 22.7 percent. The net effect of the differences shown was that the percent of high school graduates as indicated by this survey was higher that than shown by figures from the Bureau of Census for the American Indian within the state. However, the percent of high school graduates was still found to be lower for the Indian population than for the state population as a whole.

### 4.52 Previous National Studies

Two previous national studies concerning functional literacy were sufficiently similar to the survey undertaken by the Adult Indian Education Project to warrant a comparison of both the instruments used and results obtained. These were the Adult Performance Level Project - APL (Northcutt, 1975) and the Reading/Everyday Activities in Life study (Lichtman, 1972).

Over three-fourths of the indicators used in the instrument designed by the Adult Indian Education Project were similar to ones used in the previous studies. Table 4-45 shows a comparison of the results from the A.I.E.P. research and previous national studies for each of the A.I.E.P. indicators. Several indicators from previous instruments were notably more complex than the comparable indicators used in the A.I.E.P. survey. These are shown in parentheses in the table. Also, the figures listed for the R/EAL research were obtained in a study among disadvantaged youth, age 16 to 21, and, because of the dissimilarities in population groups, scores warrant only the roughest of comparisons.

TABLE 4-45

COMPARISON OF RESULTS TO PREVIOUS LITERACY SURVEYS

| | PERCENTAGE CORRECT | | |
|---|---|---|---|
| | A.I.E.P. INDIAN % | SIMILAR PREVIOUS NATIONAL % | INSTRUMENTS SOURCE |
| Occupational Knowledge | | | |
| Job Characteristics | 80.1 | (62) | (APL) |
| Vocational Interests | 78.6 | (82) | (APL) |
| Interpreting Want-Ads | 75.8 | (58) | (APL) |
| Determining Wage with Over-Time | 35.5 | 71 | APL |
| Social Security Application | 84.1 | (82) | (APL) |
| Want-Ad-Salary | 82.3 | (61)* | (R/EAL) |
| Consumer | | | |
| Calculation of Finance Charge | 74.3 | (61) | (APL) |
| Income Tax-Tax Tables | 30.7 | (30) | (APL) |
| Income Tax-Tax Credit | 30.8 | (30) | (APL) |
| Check-Cashing Policy | 73.9 | (73)+ | (APL) |
| Grocery Ad #1 | 91.0 | 97* | R/EAL |
| Grocery Ad #2 | 80.1 | 67* | R/EAL |
| Sales Tax | 48.8 | (58) | (APL) |
| Hospital Insurance | 47.9 | 73 | APL |
| Health | | | |
| Unborn Baby's Welfare | 82.0 | | |
| Items Safe for Children | 90.0 | | |
| High Protein | 63.7 | 71 | APL |

| | PERCENTAGE CORRECT | | |
|---|---|---|---|
| | A.I.E.P. | SIMILAR PREVIOUS INSTRUMENTS | |
| | INDIAN % | NATIONAL % | SOURCE |
| Health (continued) | | | |
| Signs of Alcoholism | 69.8 | | |
| Normal Body Temperature | 44.1 | 73 | APL |
| Medicine Cabinet | 87.9 | | |
| Signs of Diabetes | 49.9 | | |
| Legal | | | |
| Rights when Arrested | 79.2 | (34) | (APL) |
| Apartment Lease #1 | 81.7 | 64* | R/EAL |
| Apartment Lease #2 | 81.9 | (64)* | (R/EAL) |
| Apartment Lease-Notice | 73.3 | 72* | R/EAL |
| Fraudulent Advertising | 71.4 | (58) | (APL) |
| Equal Opportunity Notice | 64.6 | 80 | APL |

( ) Construction of this indicator was notably more complex than that used by A.I.E.P.

* R/EAL % were based on a sample population of disadvantaged youth 16-21.

+ Approximate

Four of the indicators used in the A.I.E.P. research were similar enough to those used by the Adult Performance Level study to warrant a fairly close comparison. In each case the results among the American Indian population in Oklahoma were dramatically lower than the results found among a cross section of the national population. The difference was particularly severe(35 percentage points) for the indicator involving the computation of wage earnings. There was a 29 point difference on the indicator which measured health knowledge by asking respondents to identify normal human body temperature.

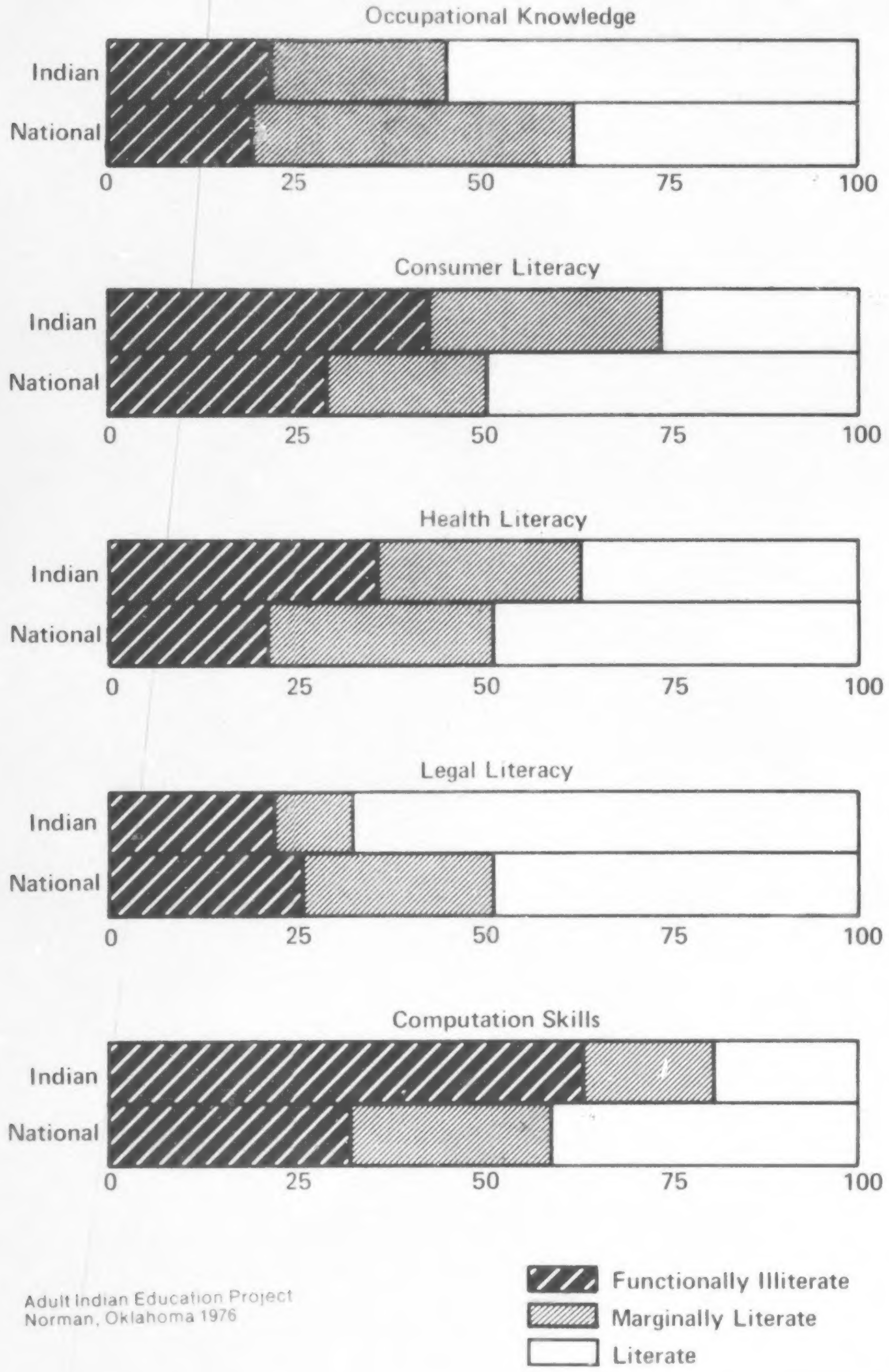
The results of the APL survey of a national sample of adults provided the best available assessment of the literacy skills of the general population. The higher complexity of the APL questions tended to reflect even lower results than if the A.I.E.P. questionnaire had been used on the same national population. Also, APL did not fully specify the criterion points which were used to seperate the population into competency levels. However, a comparison of APL and A.I.E.P. results provided at least general indications of the severity of illiteracy among Indian adults when compared to the larger society. Figure 4-46 provides this comparison in terms of the competency levels for five comparable topic and skill areas.

There were obvious and dramatic differences between the Indian and the national adults. The illiteracy rate was 23 points higher for Indian adults in consumer literacy and 30 points higher for computation skills. On the other hand the lack of legal knowledge as measured by the A.I.E.P. survey was not any more outstanding than the lack among the general population even accounting for the complexity of the APL instrument.

The APL results also indicated there were dramatic differences between the competency levels of minority and white populations (Northcutt, 1975). This was true for each of the indicators used by that study though the extent of difference fluctuated among the seperate indicators.

FIGURE 4-46

COMPARISON OF COMPETENCY LEVELS REPORTED FOR INDIAN AND NATIONAL ADULT SAMPLES



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Norman, Oklahoma 1976

### 4.53 Comparison to a Pilot Study

A pilot study was conducted using the instrument developed by the Adult Indian Education Project to survey functional literacy among three adult basic education (A.B.E) classes in Norman, Oklahoma. This pilot study cannot serve as an adequate control group for analysis of Indian/non-Indian differences. Yet, it does provide some initial comparisons which can be investigated more thoroughly by later research. The personal and social characteristics of this population are summarized in Table 4-47. Notably the A.B.E. group was between 18 and 45 years old and had completed eight to ten years of school.

An evaluation by the A.B.E. program staff determined that the instrument being utilized by the Adult Indian Education Project was considerably simpler than even the beginning materials being used in A.B.E. classes. These beginning materials were designed at about the 10.0 equivalence level. Scores on standard A.B.E. pretests for the A.B.E. students participating in the pilot study indicated that this group was functioning at approximately the 9.5 grade equivalence level.

Literacy outcomes. Tables 4-48 and 4-49 compare the results of this survey among the adult basic education classes to those Indian adult respondents from the larger survey with similar characteristics (under 45 years of age with 8 - 11 years of school completed). Though the comparison groups were not as rigorously constructed as might be desired, the comparisons shown in these tables provided at least an initial assessment of the educational needs of the adult Indian community in the context of the larger society.

The pilot study group was 88 percent female. However, as will be discussed in Section 4.61, sex differences did not have a significant influence on literacy outcomes. One factor not listed in the table of characteristics of the A.B.E. pilot study group was occupation. The majority of the pilot study group either had no occupation or were

## TABLE 4-47

## CHARACTERISTICS OF A.B.E. PILOT STUDY POPULATION

(N = 34)*

1. Sex: Male = 12%
Female = 88%

2. Age:

| | % |
|---|---|
| 16-20 | 35 |
| 21-30 | 32 |
| 31-40 | 18 |
| 41 and over | 12 |
| Not given | 3 |

Mean Age = 26

3. Marital Status:

| | % |
|---|---|
| Married | 56 |
| Separated | 3 |
| Divorced | 18 |
| Single | 18 |
| Not Given | 6 |

4. Race

1 Mexican-American
6 American Indians (17.6%) This is slightly above the American Indian proportion of adults in Cleveland County who have completed 8-11 years of school.

5. a) Years of School Completed = 9.6 mean.
b) All but three went to public schools only.
c) Fifty percent say present occupation does not make use of present skills and abilities.

6. Monthly Family Income:

Median approximately $7,644/year

7. Where do you get most of your news about community events?

| | |
|---|---|
| Radio | 29% |
| Newspaper | 32% |
| TV | 56% |
| Talking to people | 24% |

* In addition 2 unmarried persons under 18 and 2 foreign-national persons were interviewed but are excluded for statistical purposes.

## TABLE 4-48

## COMPARISON OF RESULTS TO A.B.E. PILOT STUDY GROUP

| | % ANSWERING CORRECTLY | | % DIFFERENT |
|---|---|---|---|
| | INDIAN:AIEP | A.B.E. | |
| I Occupational Knowledge Indicators | | | |
| Job Characteristics | 80 | 82 | -2 |
| Vocational Interests | 84 | 88 | -4 |
| Interpreting Want-Ads | 80 | 88 | -8 |
| Determining Wage with Overtime | 32 | 56 | -24 |
| Social Security Application | 81 | 88 | -7 |
| Want-Ad-Salary | 91 | 79 | 12 |
| II Consumer Literacy Indicators | | | |
| Calculation of Finance Charge | 75 | 71 | 4 |
| Income Tax-Tax Tables | 30 | 38 | -8 |
| Income Tax-Tax Credit | 29 | 41 | -12 |
| Check Cashing Policy | 74 | 82 | -8 |
| Grocery Ad #1 | 93 | 94 | -1 |
| Grocery Ad #2 | 81 | 91 | -10 |
| Sales Tax | 52 | 76 | -24 |
| Hospital Insurance | 39 | 74 | -35 |
| III Health Literacy Indicators | | | |
| Unborn Baby's Welfare | 76 | 85 | -9 |
| Items Safe for Children | 94 | 97 | -3 |
| High Protein | 63 | 68 | -5 |
| Signs of Alcoholism | 73 | 62 | 11 |
| Normal Body Temperature | 40 | 59 | -19 |
| Medicine Cabinet | 92 | 94 | -2 |
| Signs of Diabetes | 44 | 32 | 12 |
| IV Legal Literacy Indicators | | | |
| Rights when Arrested | 79 | 76 | 3 |
| Apartment Lease #1 | 80 | 82 | -2 |
| Apartment Lease #2 | 81 | 65 | 16 |
| Apartment Lease-Notice | 73 | 76 | -3 |
| Fradulent Advertising | 71 | 76 | -5 |
| Equal Opportunity Notice | 68 | 50 | 18 |

housewives. This was clearly not the case with the larger study group among adult Indians. As a result, the literacy scores associated with occupational knowledge might have been expected to be lower for the A.B.E. group than would ordinarily have been the case in more complete cross section of the population.

The differences between the literacy outcomes for the pilot study and those for the larger study groups are varied. Overall, the literacy level of the Indian population is lower than that of the non-Indian population, yet on five of the indicators, the Indian population had a noticeably higher percentage of correct responses. Two of these, signs of diabetes and signs of alcoholism, were probably to be expected because these health issues are of particular concern to the Indian population. The higher score on another of these indicators, the equal opportunity notice, also might have been anticipated due to the fact that equal opportunity was probably of greater interest to minority persons than to non/minority persons, especially non-minority persons not in the labor force. However, scores were also noticeably higher among the Indian population on the want-ad salary indicator and on the apartment lease number 2 indicator.

On the other hand, the severe lack of computation skills among the American Indian population as discussed in Section 4.44 of this chapter, remained prominent even when compared to the moderate literacy level of the A.B.E. population. Three indicators were particularly outstanding: determining wage earnings with overtime, addition of sales tax, and hospital insurance. These indicators measured computation skills such as simple addition, subtraction, or multiplication. For the questions overall there were 4 percent fewer Indian adults answering correctly; yet for these computation questions, 24 to 35 percent fewer Indian adults than A.B.E. adults answered correctly. The extreme difference in the figures on the determining wages question reflects the differences shown in a comparison of A.I.E.P. to previous national non-Indian populations as discussed in Section 4.52 above.

TABLE 4-49

## COMPETENCY LEVEL
## COMPARISON OF PROJECT RESULTS TO A.B.E. PILOT STUDY GROUP

| | AIEP* | | | A.B.E.* | | |
|---|---|---|---|---|---|---|
| | Functionally Illiterate % | Marginally Literate % | Literate % | Functionally Illiterate % | Marginally Literate % | Literate % |
| Overall Literacy | 18.8 | 50.5 | 30.7 | 17.6 | 41.2 | 41.2 |
| Consumer Literacy | 40.6 | 37.6 | 21.8 | 23.5 | 47.1 | 29.4 |
| Health Literacy | 40.6 | 27.7 | 31.7 | 32.4 | 20.6 | 47.1 |
| Legal Literacy | 20.8 | 12.9 | 66.3 | 29.4 | 8.8 | 61.8 |
| Occupational Literacy | 17.8 | 12.9 | 69.3 | 14.7 | 11.8 | 73.5 |

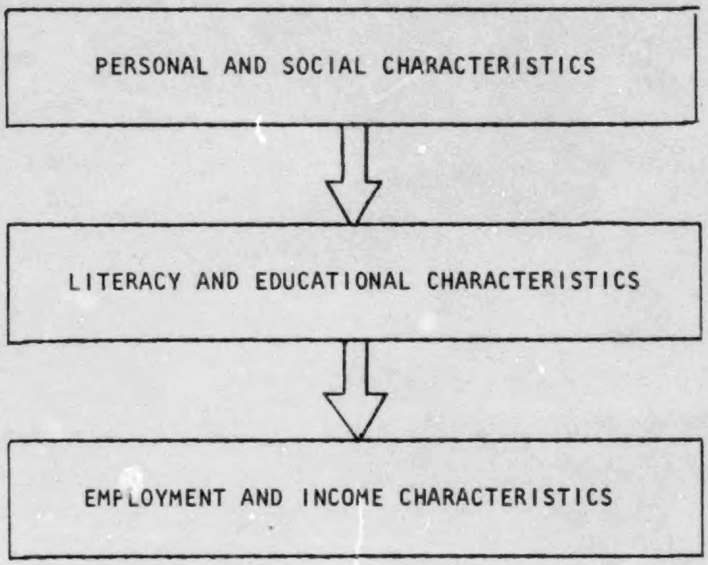
*Adults under 45 with 8-11 years of school completed.

AIEP: N=101 A. B. E.: N=34

Competency levels. A second type of comparison was made between the A.I.E.P. and the A.B.E. groups based on competency levels. Table 4-49 shows the distribution of persons functioning at different competency levels for overall literacy and for each of the four literacy areas. A review of these statistics showed quite clearly that the Indian respondents involved in the A.I.E.P. survey were functioning at a noticeably lower level of literacy in all areas except legal literacy. Again, the educational needs among adult Indians in Oklahoma, even in comparison to non-Indian populations, were in the areas of consumer education and health education.

FIGURE 4-50

FACTORS ASSOCIATED WITH LITERACY AND EDUCATIONAL ATTAINMENT


PERSONAL AND SOCIAL CHARACTERISTICS
LITERACY AND EDUCATIONAL CHARACTERISTICS
EMPLOYMENT AND INCOME CHARACTERISTICS

## 4.6 Factors Associated with Literacy and Educational Attainment

The illiteracy rate of adult Indians in Oklahoma was high even in comparison to other populations. However, the severity of this illiteracy, more than likely, did not pervade all sectors of the Indian community equally. As presented in Section 2.23, the Adult Indian Education Project surveyed the social conditions of the Indian adults involved in this research including their personal, social, tribal, and employment characteristics.

In order to gain a fuller understanding of the characteristics of the Indian adults having the highest educational needs, the project focused part of its analysis on the ways in which social and educational factors were associated with educational attainment and functional literacy. As Figure 4-50 shows, personal and social conditions were analyzed as they affected literacy and education. Literacy and educational factors were analyzed as they affected employment and income of adults.

## TABLE 4-51

### OVERALL COMPETENCY LEVELS OF RESPONDENTS BY AGE

| Age | Functionally Illiterate % | Marginally Literate % | Literate % |
|---|---|---|---|
| 16-20 | 18.4 | 40.8 | 40.8 |
| 21-25 | 9.7 | 35.5 | 54.8 |
| 26-30 | 15.3 | 33.9 | 50.8 |
| 31-35 | 10.7 | 41.1 | 48.2 |
| 36-40 | 11.5 | 37.7 | 50.8 |
| 41-45 | 19.0 | 41.4 | 39.7 |
| 46-50 | 21.8 | 29.1 | 49.1 |
| 51-55 | 16.7 | 36.1 | 47.2 |
| 56-50 | 18.6 | 30.2 | 51.2 |
| 61-65 | 44.2 | 34.6 | 21.2 |
| 66-70 | 32.6 | 50.0 | 17.4 |
| 71-75 | 51.9 | 29.6 | 18.5 |
| 76-80 | 76.5 | 17.6 | 5.9 |
| Over 80 | 63.2 | 31.6 | 5.2 |
| Total | 23.6 | 36.3 | 40.2 |

Adult Indian Education Project
Norman, Oklahoma 1976

## TABLE 4-52

## EDUCATIONAL ATTAINMENT OF RESPONDENTS BY AGE

| Age | Grades 1-4 % | Grades 5-7 % | Grade 8 % | Grades 9-11 % | High School Graduate % | Some College % | College Graduate % | Row Total % |
|---|---|---|---|---|---|---|---|---|
| 16-20 | 2.0 | - | 4.1 | 24.5 | 44.9 | 20.4 | 4.1 | 100.0 |
| 21-25 | - | 1.6 | 3.2 | 24.2 | 30.6 | 27.4 | 12.9 | 100.0 |
| 26-30 | - | 3.4 | 1.7 | 35.6 | 30.5 | 25.4 | 3.4 | 100.0 |
| 31-35 | 1.8 | - | 3.6 | 39.3 | 32.1 | 16.1 | 7.1 | 100.0 |
| 36-40 | - | - | 4.9 | 34.4 | 37.7 | 16.4 | 6.6 | 100.0 |
| 41-45 | 3.4 | 8.6 | 8.6 | 25.9 | 29.3 | 19.0 | 5.2 | 100.0 |
| 46-50 | 9.1 | 3.6 | 9.1 | 32.7 | 20.0 | 23.6 | 1.8 | 100.0 |
| 51-55 | 5.6 | 8.3 | 11.1 | 33.3 | 19.4 | 13.9 | 8.3 | 100.0 |
| 56-60 | - | 11.6 | 16.3 | 27.9 | 20.9 | 14.0 | 9.3 | 100.0 |
| 61-65 | 19.2 | 23.1 | 7.7 | 26.9 | 13.5 | 5.8 | 3.8 | 100.0 |
| 66-70 | 6.7 | 15.6 | 26.7 | 24.4 | 22.2 | 4.4 | - | 100.0 |
| 71-75 | 7.7 | 15.4 | 26.9 | 23.1 | 15.4 | 3.8 | 7.7 | 100.0 |
| 76-80 | 12.5 | 37.5 | 25.0 | - | 6.3 | 12.5 | 6.3 | 100.0 |
| 81-85 | 11.1 | 33.3 | 33.3 | 22.2 | - | - | - | 100.0 |
| 86-90 | 50.0 | 33.3 | - | 16.7 | - | - | - | 100.0 |
| 96 or over | 50.0 | - | - | 50.0 | - | - | - | 100.0 |
| Overall | (5.3) | (8.2) | (9.6) | (28.9) | (26.1) | (16.3) | (5.7) | |

Adult Indian Education Project
Norman, Oklahoma 1976

### TABLE 4-53

### OVERALL COMPETENCY LEVELS OF RESPONDENTS BY SEX

| Sex | Functionally Illiterate N | Functionally Illiterate % | Marginally Literate N | Marginally Literate % | Literate N | Literate % | Row Total N | Row Total % |
|---|---|---|---|---|---|---|---|---|
| Male | 74 | 24.7 | 101 | 33.7 | 125 | 41.7 | 300 | 100.0 |
| Female | 87 | 23.0 | 139 | 36.8 | 152 | 40.2 | 378 | 100.0 |
| Total | 161 | (23.7) | 240 | (35.4) | 277 | (40.9) | 678 | |

Adult Indian Education Project
Norman, Oklahoma 1976

### TABLE 4-54

### EDUCATIONAL ATTAINMENT OF RESPONDENTS BY SEX

| Sex | Grades 1-4 % | Grades 5-7 % | Grade 8 % | Grades 9-11 % | High School Graduate % | Some College % | College Graduate % | Row Total % |
|---|---|---|---|---|---|---|---|---|
| Male | 6.4 | 7.7 | 7.0 | 29.5 | 27.9 | 15.1 | 6.4 | 100.0 |
| Female | 4.0 | 8.2 | 11.4 | 28.5 | 25.0 | 17.3 | 5.6 | 100.0 |

Adult Indian Education Project
Norman, Oklahoma 1976

## 4.61 Personal and Social Factors Associated with Literacy and Education

The overall literacy scores, the separate literacy indexes and each indicator were analyzed to detect any differences in the literacy abilities influenced directly or indirectly by a person's sex. Virtually no differences were detected. Maximum variation on any one indicator was about four percentage points. Tables 4-53 and 4-54 show the educational attainment and overall competency levels for both men and women.

Somewhat more noticeable differences were detected among different age groups as Table 4-51 indicates. However, these differences fluctuated and no clear linear relationship was indicated. Literacy skills were considerably lower among persons over the age of 60, yet these and the other fluctuations found among persons under the age of 60 years are shown by Table 4-52 to be more directly attributable to educational level than any significant influence of age itself. This Table reflects the fact that educational attainment levels for American Indians had gradually increased over the past 40 years to the point that the dropout rate for the last seven graduating classes was down to about 28.5 percent. Though this figure is high, it still represents an improvement of about 12 percent over the previous ten year period.

## TABLE 4-55

## OVERALL COMPETENCY LEVELS OF RESPONDENTS BY TOWN SIZE

| Town Size of Respondent | Functionally Illiterate N | % | Marginally Literate N | % | Literate N | % | Row Total N | % |
|---|---|---|---|---|---|---|---|---|
| Under 2,500 | 57 | 27.7 | 75 | 36.4 | 74 | 35.9 | 206 | 100.0 |
| 2,600 to 5,000 | 16 | 18.8 | 26 | 30.6 | 43 | 50.6 | 85 | 100.0 |
| 5,100 to 10,000 | 38 | 31.4 | 44 | 36.4 | 39 | 32.2 | 121 | 100.0 |
| 10,100 to 25,000 | 14 | 15.7 | 32 | 36.0 | 43 | 48.3 | 89 | 100.0 |
| 25,100 to 99,900 | 25 | 19.2 | 49 | 37.7 | 56 | 43.1 | 130 | 100.0 |
| 100,000 and over | 7 | 23.3 | 7 | 23.3 | 16 | 53.3 | 30 | 100.0 |
| Total | 157 | (23.8) | 233 | (35.2) | 271 | (41.0) | 661 | |

Adult Indian Education Project
Norman, Oklahoma 1976

## TABLE 4-56

## EDUCATIONAL ATTAINMENT OF RESPONDENTS BY TOWN SIZE

| Town Size of Respondent | Grades 1-4 % | Grades 5-7 % | Grade 8 % | Grades 9-11 % | H. S. Graduate % | Some College % | College Graduate % | Row Total % |
|---|---|---|---|---|---|---|---|---|
| Under 2,500 | 6.3 | 8.3 | 11.7 | 31.6 | 25.7 | 13.1 | 3.4 | 100.0 |
| 2,600 to 5,000 | 3.6 | 6.0 | 8.4 | 32.5 | 36.1 | 6.0 | 7.2 | 100.0 |
| 5,100 to 10,000 | 3.3 | 11.7 | 10.8 | 32.5 | 15.8 | 18.3 | 7.5 | 100.0 |
| 10,100 to 25,000 | 3.4 | 6.8 | 8.0 | 30.7 | 21.6 | 22.7 | 6.8 | 100.0 |
| 25,100 to 99,900 | 6.2 | 6.9 | 9.2 | 19.2 | 33.8 | 20.8 | 3.8 | 100.0 |
| 100,000 and over | 6.7 | - | 3.3 | 33.3 | 20.0 | 16.7 | 20.0 | 100.0 |

Adult Indian Education Project
Norman, Oklahoma 1976

There were variations in both the educational attainment and functional literacy of persons living within different counties within the state. However, the extensive number of counties involved precluded any accurate assessment of actual differences among the counties. There were distinguishable differences among persons living in different town sizes as Tables 4-55 and 4-56 indicate. Again, these differences did not indicate any clear linear relationship and the variations were fairly complex. Influences of residence on educational attainment or functional literacy were prbably most directly due to social and educational conditions within each of the towns involved.

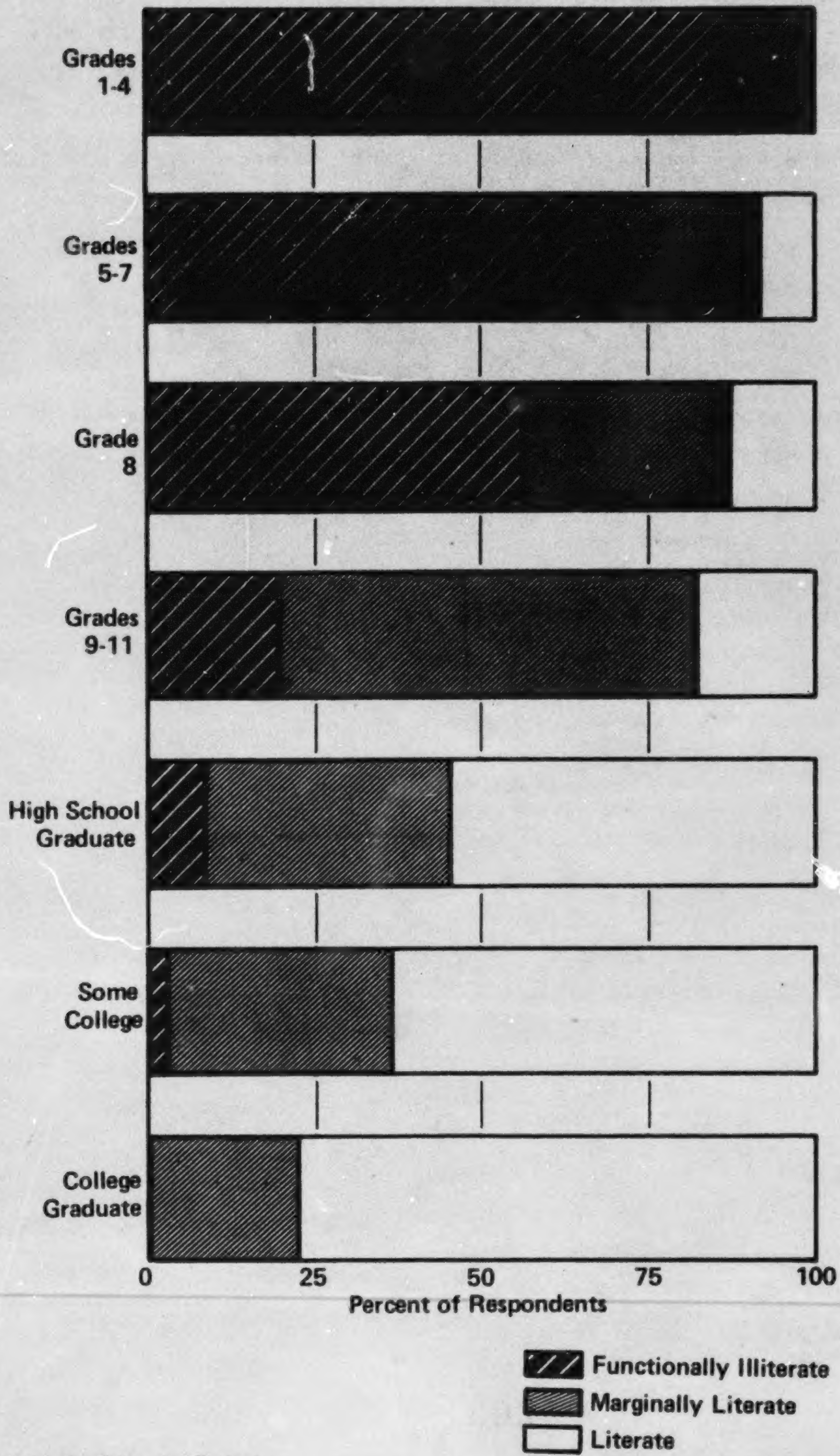
The extent of respondents' involvement in tribal and community activities did not seem to be associated in any particular way with their functional competency levels as Table 4-57 shows.

## TABLE 4-57

## THE EFFECT OF ORGANIZATIONAL INVOLVEMENT ON LITERACY

| Number of Involvements | Functionally Literate N | Functionally Literate % | Marginally Literate N | Marginally Literate % | Literate N | Literate % | Row Total % |
|---|---|---|---|---|---|---|---|
| 0 | 52 | 25.5 | 72 | 35.3 | 80 | 39.2 | 100.0 |
| 1 | 58 | 25.6 | 83 | 36.6 | 86 | 37.9 | 100.0 |
| 2 | 27 | 20.0 | 49 | 36.3 | 59 | 43.7 | 100.0 |
| 3 or more | 24 | 21.4 | 36 | 32.1 | 52 | 46.4 | 100.0 |

FIGURE 4-58 ILLITERACY ASSOCIATED WITH EDUCATIONAL ATTAINMENT



Adult Indian Education Project
Norman, Oklahoma 1976

## FIGURE 4-59

### LITERACY AND EDUCATION LEVELS
### AMONG THE AMERICAN INDIAN ADULTS
### IN OKLAHOMA*

### -ESTIMATED NUMBERS OF ADULTS WITH LITERACY DEFICIENCIES-

| Years of School Completed | Competency Level | | |
|---|---|---|---|
| | Functionally Illiterate | Marginally Literate | Literate |
| Grades 1-4 | 2,826 | 377 | 0 |
| Grades 5-7 | 3,297 | 1,319 | 471 |
| Grade 8 | 3,391 | 1,884 | 754 |
| Grades 9-11 | [illegible] | [illegible] | 6,123 |
| High School | [illegible] | [illegible] | 8,949 |
| Some College | [illegible] | [illegible] | 6,877 |
| College Graduate | [illegible] | [illegible] | 2,920 |

■ Literacy deficiency compared to years of school attended

▨ Marginal literacy compared to years of school attended

□ Literacy skills comparable to schooling

* Total estimated adult population - 63,490

Adult Indian Education Project
Norman, Oklahoma 1976

## 4.62 Educational Characteristics Affecting Literacy and Educational Attainment

The most obvious relationship between education and literacy was number of years of school completed. As Figure 4-58 indicates, there was a fairly strong relationship between number of years of school completed and overall literacy ability. There was, in fact, a correlation of .64 between these two factors. This was not particularly surprising but does confirm that education has a significant impact on the improvement of even minimal day-to-day functional reading activities. On the other hand, if, as discussed in Section 4.52, we assess the survey instrument to be constructed at an average grade level significantly less than 10.0, say 8.0 or 9.0, Table 4-59 shows that between 24,000 and 29,500 adults do not have literacy skills equivalent to the education they were supposed to have received. In different words, over half of the Indian adults that have the educational background to function within society have not been adequately trained in actual functional skills.

TABLE 4-60

COMPETENCY LEVELS BY TYPE OF SCHOOL ATTENDED

| Type of School | Functionally Illiterate % | Marginally Literate % | Literate % |
|---|---|---|---|
| BIA | 37.9 | 38.8 | 23.3 |
| Mostly BIA | 42.9 | 52.4 | 4.8 |
| Both or Neither | 30.7 | 40.4 | 28.9 |
| Mostly Public | 9.1 | 50.0 | 47.7 |
| Public | 19.5 | 32.8 | 47.7 |

## TABLE 4-61

## YEARS OF SCHOOL COMPLETED BY

## TYPE OF SCHOOL ATTENDED

| Type of School | Grades 1-4 % | Grades 5-7 % | Grade 8 % | Grades 9-11 % | High School Graduate % | Some College % | College Graduate % | Row Total % |
|---|---|---|---|---|---|---|---|---|
| BIA | 5.9 | 16.7 | 12.7 | 34.3 | 18.6 | 10.8 | 1.0 | 100.0 |
| Mostly BIA | - | 14.3 | 9.5 | 52.4 | 9.5 | 14.3 | - | 100.0 |
| Both or Neither | 13.7 | 5.9 | 7.8 | 27.5 | 19.6 | 19.6 | 5.9 | 100.0 |
| Mostly Public | - | 9.1 | 4.5 | 27.3 | 40.9 | 13.6 | 4.5 | 100.0 |
| Public | 4.4 | 6.1 | 9.1 | 26.9 | 28.8 | 17.4 | 7.2 | 100.0 |
| Overall | (5.1) | (8.1) | (9.4) | (28.9) | (26.3) | (16.3) | (5.8) | |

Adult Indian Education Project
Norman, Oklahoma 1976

Table 4-61 presents a cross-tabulation of the type of school attended by the years of school completed. This table shows a distinctively lower rate of high school completion for those students who attended BIA or mostly BIA schools for their education in comparison to those students who attended public or mostly public schools. As a result, there was also a fairly noticeable difference in the literacy levels of these two groups (see Table 4-60). These variations seem to reflect differences in the quality of education available from these two different educational systems. Part of the variation in high school completion and functional literacy may have been due to socio-economic background (a factor not measured in this research).

As Table 4-63 shows, 24.3 percent of the respondents who passed a high school equivalency test went on to attend some college. This indicates that high school equivalence programs (such as A.B.E.) serve the Indian people as crucial stepping stones to further educational development. This is particularly crucial to a community with such a serious dropout rate. In addition, Table 4-62 shows that, among those persons who did not attend college, there were relatively minor differences in the competency levels for those persons who received a high school diploma in comparison to those persons who passed a high school equivalence test. Among both groups, however, a significant number of adults were functioning at competency levels higher than those not completing eigher high school or equivalent. High school equivalence, then, does not certify adults at a lower level, rather it is a useful educational option which works effectively among Indian adults. The effect of high school equivalence programs on illiteracy is shown graphically in Figure 4-64. The effects are dramatic, yet the disproportionage group sizes allow only an approximate comparison.

Finally, among the educational characteristics, Figure 4-21 (in section 4.32) shows the educational background of those persons who indicated that they had received additional vocational, adult or continuing education. The greatest number of people indicated they had 9-12 years of school. Figure 4.65 shows the effect that vocational, adult and continuing education

## TABLE 4-62

## COMPETENCY LEVEL BY TYPE OF SCHOOL CERTIFICATE*

| Certificate Received | Functionally Illiterate N | Functionally Illiterate % | Marginally Literate N | Marginally Literate % | Literate N | Literate % | Row Total N | Row Total % |
|---|---|---|---|---|---|---|---|---|
| High School Diploma | 19 | 6.0 | 104 | 32.9 | 193 | 61.1 | 316 | 100.0 |
| Equivalency Test | 3 | 8.1 | 13 | 35.1 | 21 | 56.8 | 37 | 100.0 |
| Neither | 126 | 41.8 | 117 | 38.7 | 59 | 19.5 | 302 | 100.0 |
| Total | 148 | (22.6) | 234 | (35.7) | 273 | (41.7) | 655 | |

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* Adults who did not go on to attend college.

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Norman, Oklahoma 1976

## TABLE 4-63

## YEARS OF SCHOOL COMPLETED BY TYPE OF SCHOOL CERTIFICATE

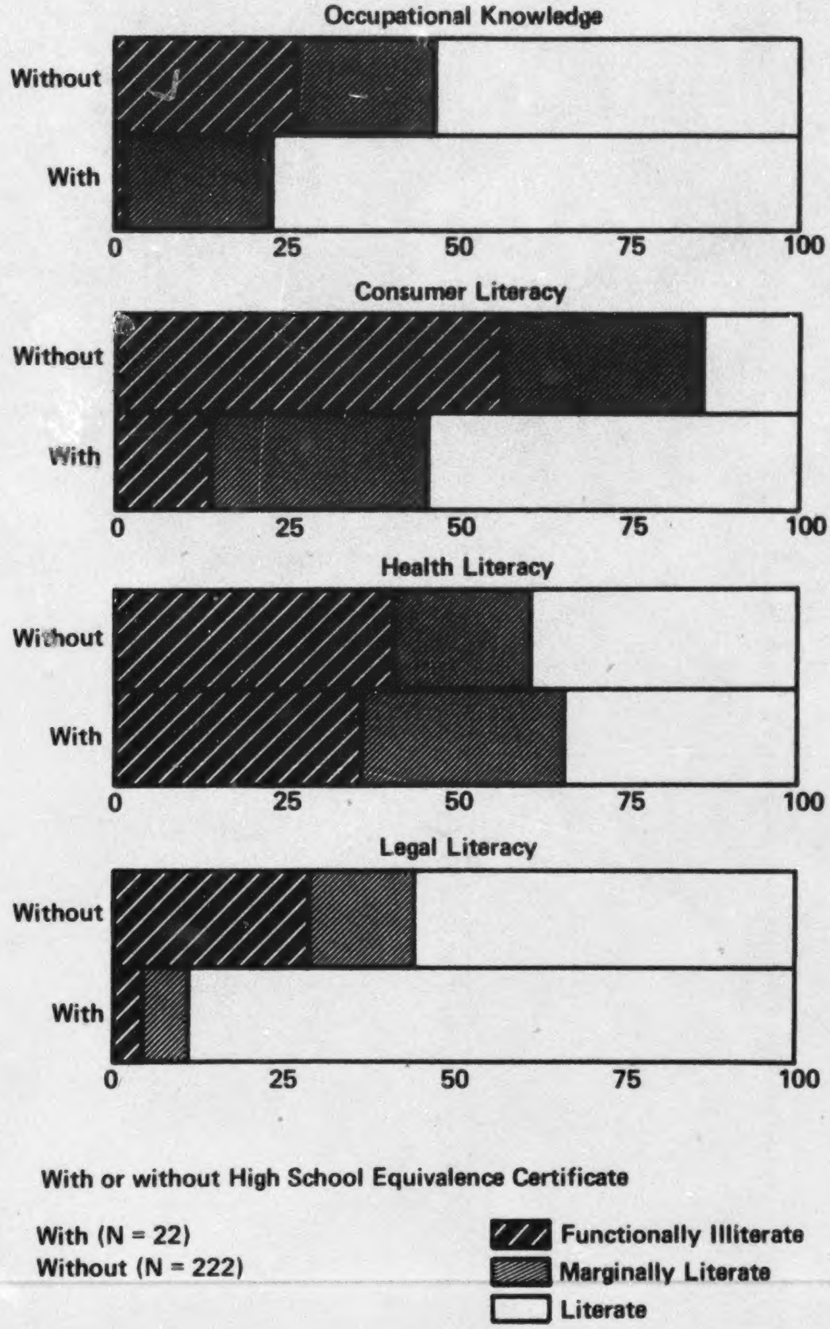
| Certificate Received | Grades 1-4 % | Grades 5-7 % | Grade 8 % | Grades 9-11 % | H. S. Graduate % | Some College % | College Graduate % | Row Total % |
|---|---|---|---|---|---|---|---|---|
| High School Diploma | 0.3 | - | - | 0.3 | 54.7 | 32.3 | 12.3 | 100.0 |
| Equivalency Test | - | 5.4 | 13.5 | 45.9 | 10.8 | 21.6 | 2.7 | 100.0 |
| Neither | 10.3 | 15.9 | 17.9 | 55.8 | - | - | - | 100.0 |
| | | | | (28.4) | | | | |

Adult Indian Education Project
Norman, Oklahoma 1976

## FIGURE 4-64

### THE EFFECT OF HIGH SCHOOL EQUIVALENCY PROGRAMS ON ILLITERACY

(Adults who have completed 8-11 years of school)



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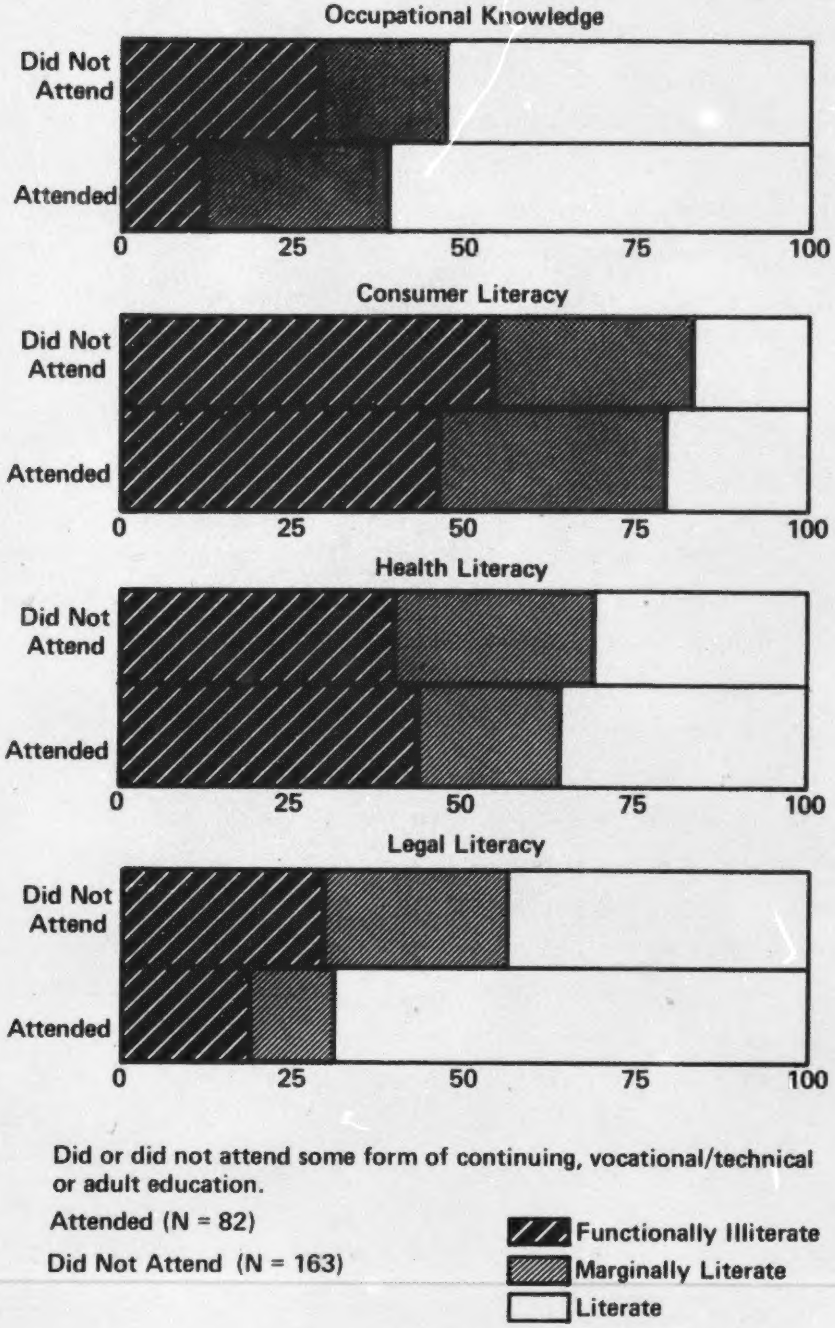
Adult Indian Education Project
Norman, Oklahoma 1970

FIGURE 4-65

## THE EFFECT OF ATTENDANCE IN CONTINUING EDUCATION PROGRAMS ON ILLITERACY
(Adults who completed 8-11 years of school)



Did or did not attend some form of continuing, vocational/technical or adult education.

Attended (N = 82)

Did Not Attend (N = 163)

has had on the literacy ability of persons not graduating from high school. As indicated, these programs generally contributed to increasing literacy ability of the people participating.

The effect of continuing education varied among the separate literacy areas. The most remarkable variation in this case was within occupational knowledge, where the illiteracy rate differed 15 percent for those who attended these programs compared to those who did not. This variation might well have been anticipated since the primary focus of vocational and continuing education is often an increased development in occupational skills.

### 4.63 The Effect of Educational Attainment and Functional Literacy on Employment Characteristics

Both educational attainment and functional literacy appeared to be somewhat directly associated with job mobility as measured by the survey question requesting respondents to list the number of jobs they had held in the last ten years. In particular, those persons indicating that they had not held any jobs in the last ten years generally had a lower educational background and were functioning at a lower literacy level. Another survey question asked the respondent whether his/her present occupation used his/her training and experience. As reported earlier, 28.5 percent of the respondents felt that their present occupations did not fully utilize their training and experience. However, as Tables 4-66 and 4-67 indicate, this condition was affected only to a small extent by actual literacy ability, but in no clear way by educational attainment except for those persons completing four years of less.

Tables 4-68 and 4-69 present perhaps the clearest indication of the effect of educational attainment and functional literacy on the employment characteristics of American Indians within the state of Oklahoma. Strong linear relationships were found between the number of years of school completed and income (4=.44) and between the overall literacy ability and income (r=.51). The correlation between income and literacy

## TABLE 4-66

## NUMBER OF JOBS HELD IN THE LAST TEN YEARS BY COMPETENCY LEVELS

| Competency Levels | Number of Jobs by Percent<br>0 | 1 | 2 | 3 | 4-5 | 6 or More | Row Total |
|---|---|---|---|---|---|---|---|
| Functionally Illiterate | 36.4 | 30.7 | 7.9 | 10.0 | 7.9 | 7.1 | 100.0 |
| Marginally Literate | 15.9 | 34.4 | 14.1 | 13.7 | 13.2 | 8.8 | 100.0 |
| Literate | 9.5 | 30.3 | 23.5 | 15.2 | 15.2 | 6.4 | 100.0 |
| Overall | (17.7) | (31.9) | (16.6) | (13.5) | (12.8) | (7.4) | |

**Adult Indian Education Project**
**Norman, Oklahoma 1976**

## TABLE 4-67

## NUMBER OF JOBS HELD IN LAST TEN YEARS BY YEARS OF SCHOOL COMPLETED

| Years of School | Number of Jobs by Percent<br>0 | 1 | 2 | 3 | 4-5 | 6 or More | Row Total |
|---|---|---|---|---|---|---|---|
| Grades 1-4 | 44.4 | 29.6 | 7.4 | 7.4 | 3.7 | 7.4 | 100.0 |
| Grades 5-7 | 42.0 | 40.0 | 8.0 | 4.0 | 2.0 | 4.0 | 100.0 |
| Grade 8 | 40.7 | 37.3 | 5.1 | 8.5 | 5.1 | 3.4 | 100.0 |
| Grades 9-11 | 15.7 | 29.2 | 19.1 | 10.1 | 15.7 | 10.1 | 100.0 |
| High School Graduate | 10.7 | 30.8 | 17.8 | 20.7 | 13.0 | 7.1 | 100.0 |
| Some College | 3.7 | 29.9 | 24.3 | 16.8 | 17.8 | 7.5 | 100.0 |
| College Graduate | 10.3 | 35.9 | 15.4 | 12.8 | 17.9 | 7.7 | 100.0 |

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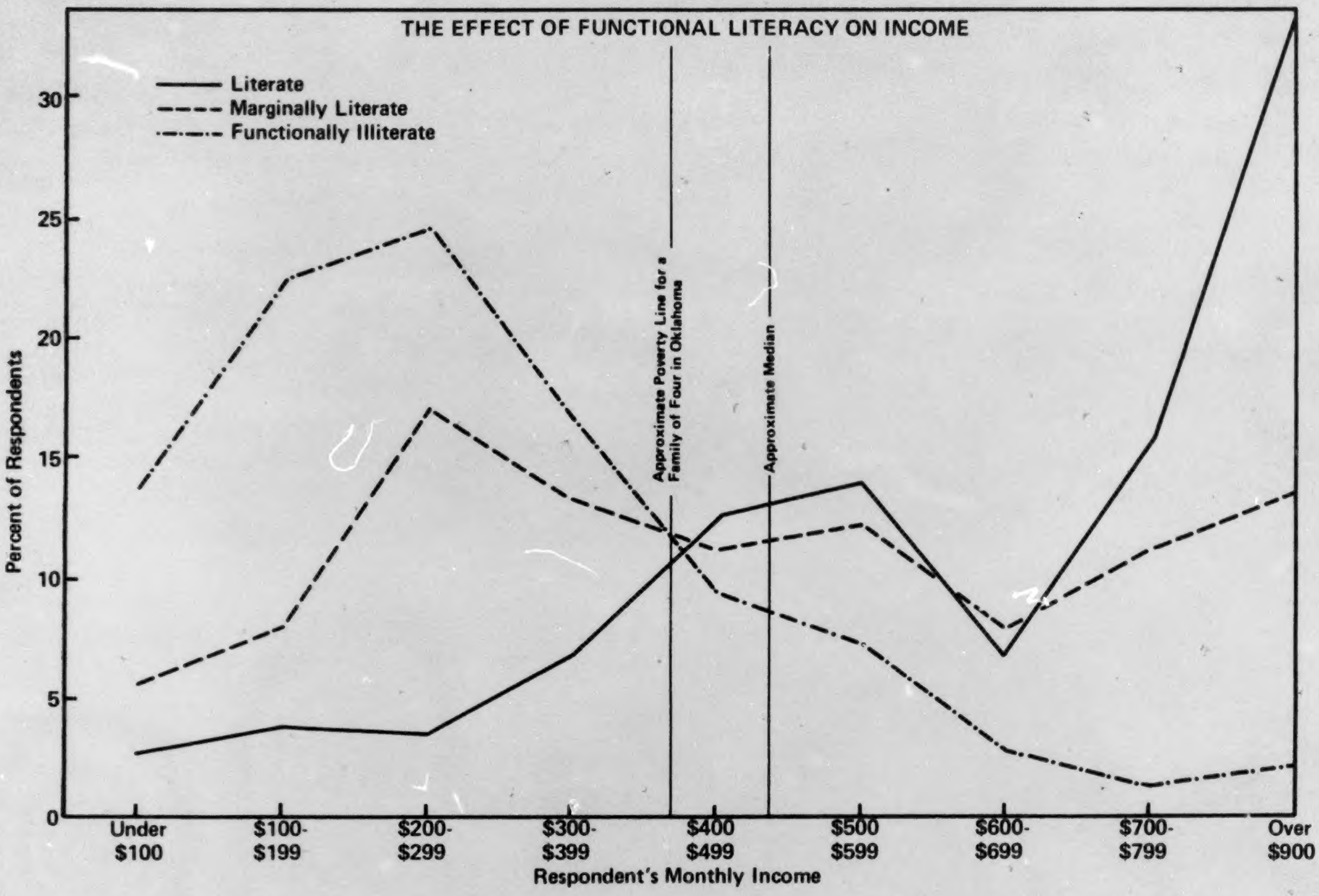
suggests that functional literacy was at least as good a predictor of income as was educational attainment. This result lends credence to the notion that the literacy instrument devised for this survey did, indeed, validly provide an assessment of those educational skills which are necessary and vital to functioning within contemporary American society.

## TABLE 4-68

## DISTRIBUTION OF RESPONDENT'S INCOME BY YEARS OF SCHOOL COMPLETED

| | Respondent's Monthly Income | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Years of School | Under $100 | $100 - $199 | $200 - $299 | $300 - $399 | $400 - $499 | $500 - $599 | $600 - $699 | $700 - $799 | Over $900 | Row Total |
| Grades 1-4 | 25.0 | 18.8 | 21.9 | 12.5 | 12.5 | 3.1 | 3.1 | 0.0 | 3.1 | 100.0 |
| Grades 5-7 | 14.6 | 20.8 | 29.2 | 8.3 | 10.4 | 8.3 | 0.0 | 2.1 | 6.3 | 100.0 |
| Grade 8 | 6.9 | 17.2 | 24.1 | 20.7 | 6.9 | 8.6 | 6.9 | 5.2 | 3.4 | 100.0 |
| Grades 9-11 | 5.9 | 8.9 | 16.0 | 13.6 | 13.6 | 14.2 | 6.5 | 8.3 | 13.0 | 100.0 |
| High School Graduate | 2.4 | 6.5 | 6.0 | 9.5 | 11.9 | 15.5 | 7.7 | 16.7 | 23.8 | 100.0 |
| Some College | 2.9 | 4.9 | 5.8 | 10.7 | 11.7 | 7.8 | 7.8 | 18.4 | 30.1 | 100.0 |
| College Graduate | 5.6 | 0.0 | 2.8 | 0.0 | 5.6 | 13.9 | 5.6 | 8.3 | 58.3 | 100.0 |

FIGURE 4-69



Adult Indian Education Project
Norman, Oklahoma 1976

# CHAPTER 5

# CONCLUSIONS

This chapter will review the Adult Indian Education Project Survey of literacy and education among adult Indians in Oklahoma and will examine the results of this survey and their implications for Indian education both for the tribes within the state of Oklahoma and for the nation in general.

## 5.1 Review of the Survey

The Adult Indian Education Project (A.I.E.P.) was a fifteen month survey of literacy and education among adult Indians in Oklahoma sponsored by the U. S. Office of Education, Indian Education Division and in part by the Office of Native American Programs. A brief review of the Adult Indian Education Project includes a description of the initial barriers confronted by the project, the methods used in the survey, the objectives which the project attained and a brief discussion of the uniquenesses of the project.

### 5.11 Initial Barriers

There were some initial barriers that the A.I.E.P. staff had to overcome in conducting the survey. (1) Past research within the Indian community conducted and designed by people outside of the community had made some tribes suspicious of research projects. This was overcome for the most part by active involvement of the various tribal groups in research design and execution and by extensive personal contact with tribal officials and tribal business councils. (2) Due to the severe lack of information about the Indian community in Oklahoma on even such matters as population size, and social and educational characteristics, the A.I.E.P. survey had little information on which to base its research. As a result the survey had to virtually construct an entire set of data on the social and educational

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characteristics of the adult Indian within Oklahoma. (3) There were 34 different tribal groups principally located in Oklahoma and the majority of these tribal groups functioned autonomously. As a result the A.I.E.P. staff had to avoid politically sensitive inter-tribal and intra-tribal issues and attempt to gain the respect of all of the people involved in different parts of the survey. Those involved included tribal business councils whose permission had to be secured, field interviewers who collected the survey data and respondents who eventually determined the credibility of the project. (4) Finally, the Adult Indian Education Project was conducted among the largest Indian population that did not live on reservations but instead resided in racially mixed small towns spread across the state. These four initial barriers posed initial management problems that had to be satisfactorily resolved to insure the success of the project.

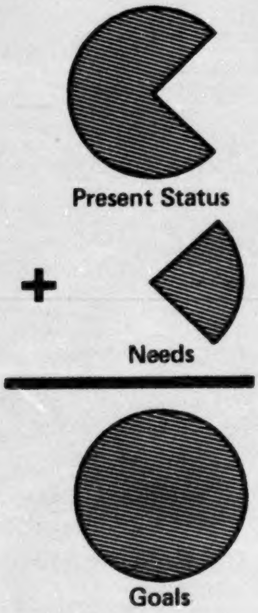
### 5.12 The Approach

Tribes were contacted for participation in the study. With tribal cooperation, a sample was taken of adults from tribal membership lists. A survey questionnaire, or instrument, was developed in conjunction with a review panel of Indian professionals involved in a variety of services within the Indian community including industry, education, journalism, community health, law and other service agencies. The instrument was field tested among two groups of tribal members who were being trained to serve as field interviewers. Field interviewers were identified from within the tribes and trained in methods of interviewing. They then worked with the Project in conducting interviews in the cities, towns, and rural regions across the state.

The survey primarily assessed educational attainment and literacy. Literacy was defined further as functional literacy: "reading skills which an adult most possess to function minimally within daily American society." The instrument measured literacy at a more basic level than had previous functional literacy surveys. Adults were asked to read cards containing typical day-to-day literacy items such as newspaper ads or a social security application and to answer questions related to these items. Respondents were not required to complete any written material or to read directions from a test booklet. In addition to education and literacy the A.I.E.P. survey assessed personal, social, tribal and employment characteristics. The assessment of these "influencing variables" allowed the survey to more exactly determine the background characteristics of those persons having the highest educational need.

## 5.13 Completion of the Objectives

The Adult Indian Education Project successfully completed the project objectives. First, the project provided a thorough and accurate description of the extent of illiteracy and educational attainment among adult Indians in the state of Oklahoma. Second, the project was successful in developing an extensive data base on the social and educational characteristics of Indian adults within the state and within the participating tribal groups. Third, by conducting a survey of these characteristics as part of a survey of literacy and educational attainment, the survey results provided a detailed analysis of the personal, social, tribal, employment and educational factors associated with illiteracy and educational attainment.



This description of the present status of Indian education in Oklahoma and comprehensive assessment of educational needs in the Indian community provided the information necessary to make program development and modification decisions related to Indian education at the tribal, state and national level. By completing these objectives, the Adult Indian Education Project insured that programs will be able to address educational needs while taking present conditions into account and to move with greater certainty towards the educational goals of the adult American Indian community.

**THE A.I.E.P. SURVEY WAS THE FIRST STATEWIDE SURVEY ON FUNCTIONAL LITERACY AMONG ADULT INDIANS.**

## 5.14 The Uniquenesses of this Study

The Adult Indian Education Project was unique in that:

(1) It was one of the first surveys which examined functional literacy on such a large scale.

(2) It was one of the first inter-tribal surveys of this scale among American Indian tribes.

(3) It was the first statewide survey on functional literacy among adult Indians.

(4) It was designed in large part and in conjuction with members of the Indian community being surveyed. This insured that the people who would be responsible for implementing program development and modification called for by the survey results had the fullest opportunity to provide guidance in the research surveying the educational needs being affected.

(5) It surveyed the Indian population of Oklahoma on the basis of tribal membership - using a high sample proportion. This resulting research was then returned to those tribes to (a) help them assess the educational needs of their communities, and (b) facilitate the coordination of their education efforts with those state and national agencies concerned about the educational needs of Indians within Oklahoma.

(6) It utilized data which was exclusively collected by Native Americans. In addition, training procedures were developed for Native American interviewers.

(7) It developed a basic data base which was, in many cases, previously unavailable to the tribe or to any statewide Indian education effort.

(8) It devloped a measurement device potentially useful for pre-test and post-test evaluation of the impact of future Indian education programs on literacy and education.

(9) It provided full documentation and reporting of its activities in order to lay the foundation for future surveys in literacy and education among Indian adults by other tribal groups or in other states.

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Part C

## 5.2 Review of the Results

The survey results were obtained on the social characteristics, educational attainment, literacy and functional competency levels of the adult Indian population in the state of Oklahoma. Also, results were obtained on the association between social characteristics and the educational and literacy characteristics of the adults.

### 5.21 Social Characteristics

The Indian population surveyed was well distributed by sex and age. Respondents were contacted in counties and towns well distributed across the state. The majority of the population (60.1 percent) was married.

Approximately 20 percent of the Native American adults within the state were not reported as American Indians on the 1970 census. It is believed that a good proportion of these were excluded from the census completely. Those people excluded seemingly were not excluded because of the extent of their Indian blood. In a closely related finding the population of the American Indian in Oklahoma was estimated based on a count of adults from tribal membership lists. There were an estimated 115,800 American Indians of all ages who were members of tribes within the state. This is also about a 20 percent difference from the figure recorded for American Indians within the state by the 1970 Bureau of Census Report.

The survey respondents were well distributed among the 19 participating tribes. Contrary to some popular opinion, the tribal membership lists are, seemingly, not inflated with the names of persons who are not actually Indian. Thirty-six (36) percent of the adults surveyed said they speak at least some of their tribal language. The adult Indian community relies overwhelmingly on newspapers and talking to people as a way of finding out about current tribal events.

Information was obtained concerning the occupation, job satisfaction and job mobility of the A.I.E.P. respondents. Their median yearly income was approximately $5,800.

### 5.22 Educational Attainment

Several types of educational attainment data were obtained during the A.I.E.P. survey. Forty-eight (48) percent of the Indian adults indicated that they had completed high school and an additional 5.7 percent had passed the high school equivalence test. Eighteen and seven-tenths (18.7) percent had BIA school for either most or all of their schooling, 37 percent of the adults reported that they had had some technical, vocational, continuing or other adult education after leaving high school.

### 5.23 Functional Literacy

Literacy was examined among Indian adults using a variety of "functional literacy" measures. Questions were asked of respondents based on day-to-day reading items which had been identified as necessary for functioning within contemporary American society. Questions were constructed in four literacy areas: occupational knowledge, consumer literacy, health literacy and legal literacy.

Around 80 percent of the Indian adults were able to perform most of the occupational knowledge tasks. However, on one question only 35 percent were able to figure weekly wages involving overtime. In the area of consumer literacy, between 80 and 90 percent of the adults successfully answered newspaper questions, yet only 30 percent successfully completed two income tax questions (one requiring simple multiplication, the other requiring looking up a number within a tax table). In another item over 50 percent of the adult Indians were unable to add five two-digit numbers involving money. In total 42.8 percent of the adult Native Americans lack the skills necessary to function as a consumer within contemporary American society. Another 30.4 percent were only marginally competent at consumer skills.

The illiteracy rate in the health area was also quite high. Over 50 percent of the adults could not identify the normal human body temperature and over 35 percent did not know which foods were high protein foods. Around 70 percent of the Indian adults were able to accurately answer most of the questions associated with legal literacy. However, on a question involving a brief statement of benefits from an insurance policy, less than 50 percent were able to provide the correct answer.

The illiteracy rate of Indian adults within the state of Oklahoma is very high encompassing a minimum of 20 to 40 percent of the adult population. Adults most successfully performed reading tasks associated with newspaper items. The most severe factor in the high illiteracy rate among adult Indians involved daily computation skills; 63 percent of the adult population were functionally illiterate in the area of computation skills; another 17 percent were only marginally competent in computation skills. In total over 56 percent of Indian adults were functionally illiterate in one or more literacy areas. Futhermore, only 14 percent were literate in all four literacy areas.

The patterns found in this survey of illiteracy mirror in many ways the finding of previous research, however, even in comparison to the national population and to the local non-Indian population, Indian adults are considerably more illiterate in consumer and computation skills.

### 5.24 Factors Associated with Education and Literacy

Literacy and education levels were not greatly different between men and women. There was also no clear effect of age on literacy abilities though generally the educational attainment of younger adults was higher than older adults. Both the literacy and education fluctuated for people living in different size towns.

The persons having more education generally had greater literacy abilities. Elemntary and secondary schooling seemed to have the greatest impact on literacy though high school equivalence programs and continuing education also increased a person's literacy abilties. Adults who had received their education from public schools generally were more literate than those who had attended BIA schools. On the other hand, over half of those adults whose level of schooling should have been sufficient to give them basic literacy abilities do not actually possess those abilities.

Finally, a strong relationship was found between functional literacy and income. It is difficult to assess whether prior socio-economic background affected educational attainment and the development of literacy abilities. However, it is quite clearly indicated that the increase of functional literacy abilities through some form of education would have the eventual effect of increasing an adult's income level and general ability to function within daily American society.

## 5.3 Implications of the A.I.E.P. Survey

The survey of literacy and education conducted by the Adult Indian Education Project was fairly extensive in its assessment of the educatinal needs of the adult Indians in Oklahoma. As a result, the findings were numerous, the analysis complex at times; it is likely to be several years before the full implications of this research can be examined. However, this section attempts to present at least some preliminary discussion about the more obvious implications of both the execution and the results of the A.I.E.P. survey. This discussion will concern population data, educational needs, response to the survey results, correctional approaches suggested by the data, development of the American Indian community and implications for future research.

### 5.31 Population Data

Findings by the A.I.E.P. survey indicated that [redacted]. This adjustment has serious implications for a variety of state and federal service programs involved in the funding and delivery of services to the American Indian population within Oklahoma. Pertinent aspects of these findings from this research should be circulated as fully as possible among such agencies involved in Indian services in areas beyond just education.

In addition, this adjustment in the population count should be closely examined for its implications on future counts of the Indian community within Oklahoma most notably the 1980 census. Results of this survey indicate that the success of a survey within the Indian community is critically affected by the degree to which the members of that community identify with the interviewers and the purpose of the research being conducted. The A.I.E.P. effort has shown that Native Americans are very effective as professional field interviewers when they view the research as useful. [redacted].

## INFORMATION ON EDUCATIONAL NEEDS MUST BE KEPT UP-TO-DATE.

Another issue associated with population data is that of defining who is to be included in the population group called American Indian. Often, arbitrary measures are set which have little to do with which racial or cultural group a person identifies himself. The case of the American Indian is unique among minority groups in that a strict measure of blood quantum is used in a variety of agencies to specify whether a person's identity should be considered American Indian or not. This would seem to have serious impact on the constitution of the American Indian population. It is further compounded by the fact that funds are often associated with this identification process. [redacted].

Tribal groups within the state of Oklahoma each have their own method of identifying who is to be included as a member of the tribal community. In many cases, the [redacted], not reflecting the full extent of the tribal membership. A high proportion of the people with whom the Adult Indian Education Project attempted to make contact were no longer living at the address listed on the tribal list. In order to adequately provide services to the Indian population within Oklahoma, [redacted]. Consequently, one of the implications of this research is that [redacted]

[redacted]. Further, increased abilities of Indian tribes to communicate with their membership would greatly simplify, especially in non-urban areas, the task of Indian and other service agencies of assessing basic personal, social, educational and employment characteristics of the American Indian population. Had steps been taken previously to provide this development, they might have prevented the present severe lack of basic data which has hindered educational efforts within the Indian communities of Oklahoma.

### 5.32 Educational Needs

The educational needs of adult Indians within Oklahoma are numerous and extend into a broad range of daily adult activities. [redacted] of the adult Indian population [redacted] and over half of the adults who had completed more than eight years of school had not attained literacy abilities equivalent to their years of schooling. Though the [redacted], it is still a serious educational problem as [redacted] of the persons graduating in the last seven years [redacted]. There are two principal implications that can be drawn from this information: First, additional [redacted] among Indian students and to increase the actual quality of literacy skills which are obtained by those who do complete their education. Second, additional [redacted] who are not able to complete their high school education [redacted] through high school equivalence programs, vocational and continuing education programs and also alternative educational programs specifically designed for the adult Indian community in accordance with the needs indicated by the functional literacy portion of the A.I.E.P. survey.

The illiteracy rate is very high among adult Indians within Oklahoma and as indicated above is so shocking in [redacted] as to [redacted] from organizations concerned with Indian education. These were [redacted], [redacted] and [redacted].

[redacted]

The present situation indicates that Native American adults' lack of consumer skills might likely make them subject o exploitation by others especially in matters dealing with money or percentages or other forms of basic daily arithmetic. In addition, the adults' lack of understanding of health literacy and basic health issues such as normal human body temperature and protein foods indicates that they would be frequently subject to health problems which among other things would indicate potential nutritional deficiencies and possible a higher utilization of health service agencies than would ordinarily be necessary.

### 5.33 Response to the Survey

Historical background. In order to fully address these and other literacy and educational problems, the circumstances which allowed these conditions to develop must be at least briefly considered. American Indians as a group have historically been one of several minorities who have been socio-economically down-trodden. Further, the particular methods used to provide federal support to the American Indians have often put Indian adults in a dependent relationship and reduced their rights and abilities in self-management including money handling and education. Additionally, American Indians have historically had health perceptions and strategies different from those of the mainstream American society. Finally, the American Indian's lifestyles and language patterns historically have not required the extensive use of abstract logic such as that which underlies money and the use of numbers in general.

Many of these conditions have changed or are still in the process of changing. However, individuals who are presently adults grew up in circumstances where they had to face socio-economic conditions which were significantly different from their parents'. At the same time, they had to deal with a quickly changing society which had values different from their own. As a result, many children during that period of time and even to a certain extent, today, do not have role models that are fully appropriate to functioning within mainstream American society. Consequently, programs that are designed to address literacy and educational problems within the American Indian community must take these historical and cultural differences into account. Simplified consumer education, health education and remedial math programs cannot be considered adequate response to these Indian education needs.

Awareness of the problem. One of the principal reasons for the funding of the Adult Indian Education Project survey of literacy and education among adult Indians in Oklahoma was a severe lack of basic data concerning the educational attainment and literacy levels of Indian adults within the state. This problem has at least been initially solved by the survey and an extensive data base foundation has been laid upon which decision-makers can base decisions concerning adult Indian education within the state. The educational needs as assessed by the survey indicate that the illiteracy rate and lack of high school completion are extremely high among this population and in some areas an immediate response is called for.

One of the first prerequisites for addressing the Indian education needs is to insure maximum awareness of the problem at hand. In this particual case, full dissemination of these survey results should be undertaken insuring that all tribal, state and national decision-makers involved with Indian education are fully apprised of educational conditions and needs of the adult Indian in Oklahoma. Further, state and local administrators and teachers involved in educating both Indian children and adults should be made aware of and become sensitive to the present conditions.

# AWARENESS OF THE PROBLEM IS THE KEY TO GAINING SUPPORT AND DEVELOPING SOLUTIONS.

Even beyond these audiences, part of the response to the severe needs indicated must come from public support, both in the state and in the nation. The general public, especially within the state of Oklahoma (which has the largest Indian population of any state in the nation), has for too long been unaware of the high educational needs of the American Indian. There is in fact more awareness of the educational needs of Oklahoma Indians by people outside the state than there is by people inside the state. The effect of this lack of awareness is very direct not only for adult education but also for elementary, secondary and higher education. There is generally a lack of understanding by local communities concerning the educational needs of the Indians within their community and as a result, educational programs face public relations problems as well as educational problems and their effort to address Indian education needs. On the state level this [redacted] ~~has a direct financial impact on the lack of monies provided to address Indian education needs across the state.~~

~~Dissemination then must include public audiences as well as tribal, state and national decision-makers.~~ At the tribal level, full copies of the A.I.E.P survey should be made available to each of the tribes participating in the survey and all of the remaining tribes within the state interested in the survey results. In addition, ~~participating tribes should have the option of obtaining a full supplementary report which provides data for~~ that particular tribe ~~alone and~~ reports ~~the specific educational needs for that particular tribe~~. ~~Technical~~ assistance should be attained

~~by tribal groups when necessary to construct programs or make program modifications based on the findings of this survey.~~

The ~~various statewide Indian service organizations should be provided copies of the report in order to become more fully aware of the needs of American Indians as it relates to the programs and services being offered by those organizations~~. In addition, state governmental agencies involved in the education of Indians, both adults and children, within the state should be provided full copies of the report in order to assess what developments and modifications should be made in policies and programs within state government.

At the national level, full copies of the survey results should be made available to all educational organizations involved in Indian education as they effect programs both within the state of Oklahoma and in other states having high Indian population. In addition, a summary of the results of the survey should be made available to tribal and other Indian organizations across the nation to apprise them of potential educational needs of the Indians within their own service areas and to provide for them an outline of the Adult Indian Education Project as an exemplary needs assessment tool to be used while addressing the provisions of Part C of the 1972 Indian Education Act.

### 5.34 Correctional Approaches Suggested by the Data

Educational approaches - Adult Programs. By the results of the A.I.E.P. survey, adult basic education programs have been shown to be fairly effective among the adult Indian community though at present they have only effected a small percentage of the Indian population. Vocational, technical, adult education and continuing education programs also have demonstrated effectiveness in increasing the literacy capabilities of Indian adults. ~~Both of these educational strategies should be continued~~ in an effort to address the educational needs of Indian adults. ~~Adult basic education programs are particularly critical to a population that has such a historical and continuing drop-out problem~~.

# HIGH SCHOOL EQUIVALENCE, VOCATIONAL/TECHNICAL AND CONTINUING EDUCATION PROGRAMS SHOULD BE EXPANDED.

However, as implicated by the results, ~~these programs need to expand~~ beyond their present scope. There are substantial numbers of adults who have not completed even the eighth grade who also have a high degree of educational need. Yet results indicate that high school drop-outs are the preincipal users of these two particular programs. There is a need to make available educational programs to persons having less than an eighth grade education which might potentially be used as a stepping stone to these more traditional type programs. Programs at all levels should be conducted as much as possible by members of the Indian community being served.

~~Educational programs structured for adults within the Indian community should contain a substantial measure of functional skills training~~ in all literacy areas most especially in the areas of consumer literacy, health literacy and computational skills. In addition, ~~there are programs~~ now available ~~which provide some kinds of schooling credit for experiences and knowledge which adults have gained~~ since being out of school (called "credit of life experience). ~~Through this and other kinds of adult educational options~~, ~~adults are less fearful of returning to the educational process.~~ They need not repeat , learning again things they already know from their day-to-day experience.

~~Educational options should be explored~~ for the adults in the Indian community which provide the maximum amount of flexibility in offering schooling credit ~~in ways other than formalized classroom situations~~. As this research indicates, programs are especially needed which provide more practical and functional ways of acquiring literacy and educational skills. These options might include cooperative education, functioning in cooperation with other existing service programs.

Again, however, particular focus should be given to consumer, health, computational, and skill developments in a practical way. ~~Functionally oriented training materials should be developed~~ which could help the adult identify with the materials being learned. For example, adult basic education classes presently using formalized class textbooks might develop materials more functionally oriented to teach the same skills thus addressing the adult with materials and skills that have obvious practical value. The ~~survey instrument developed by the Adult Indian Education Project~~ or one similar to it ~~might be useful~~ as a way of measuring the actual impact of such adult education programs on the functional literacy skills of adults.

Educational Approaches - Elementary and Secondary Schooling. The educational needs of adults most generally reflect the social and educational conditions within the community involved. Consequently, the educational needs of adults generally reflect similar educational needs arising from primary and secondary educational systems. The continuing drop-out rate and more fundamentally the almost shocking lack of functional literacy skills among those who have received the necessary schooling, indicate that not only are there numerous educational needs among adults within the state but also similar educational needs are found among persons recently leaving the educational system, either as a drop-out or as a graduate. Further, the severe lack of literacy in the areas of consumer education, health education and computation skills reflects a deficiency in the educational training received by students within the state of Oklahoma.

As stated previously, however, these problems are not easity addressed by simplified remedial education programs either after the student has left the formal educational setting or while the student is still attaining his formal schooling. It is necessary that the efforts to prepare teachers to gain a fuller understanding of the cultural differences involved in educating American Indian students be continued. This understanding of cultural differences plays a great part in pointing out historical difficulties in the consumer education, health education and computation areas. As mentioned above, these historical aspects of Indian education often force on education the responsibility for providing adequate role models in a variety of functional competence areas, and exposing students to daily circumstances in a way that allows them to develop skills at coping within contemporary American society.

As a result, educational curriculum planning might also benefit from implications of this survey. In particular, training in areas such as computation might well be conducted more effectively by using practical, functional skills such as the exchange of money, figuring interest rates and multiplying basic numbers in "real-world" exercises. During the A.I.E.P. research, one teacher involved with Indian studetns indicated that in the area of computation one of the most effective methods she had found for teaching computational skills was by using such practical methods as taking students to a local store and allowing them to make a "pretend" purchase of a major item and then calculating the total cost and monthly payments for that item. Using this approach, teachers said that the abstract information generally found in a classroom textbook was "brought to life," and working with abstract numbers suddenly had practical utility.

Finally, survey results indicate that the Bureau of Indian Affairs must make changes in its boarding school system if it is to provide educational training for students which is equal to public schooling systems. Changes are needed in the BIA schools which: (1) either increase the quality of educational programs or (2) approach more directly the socio-economic and cultural background of the incoming students, insuring that these students are brought up to a level which enables them to obtain skills comparable to those obtained in a public school setting.

Educational Approaches - Statewide. As this survey of literacy and education demonstrates, the educational problems of the Indian community within Oklahoma are quite clearly not just a tribal problem. The educational conditions of the American Indian reflect a statewide problem of high drop-out rates, lack of high school completion, inadequate educational preparation in basic functional literacy skills and continued illiteracy among substantial numbers of American Indian adults. It is important to insure that problems found within a community are solved as much as possible by members of that community. However, attempting to solve the Indian education problem at any level, adult, elementary, secondary or higher education by using separate tribal programs alone may end up being a piecemeal approach and administratively wasteful. It is necessary, instead, to have an intensive Indian education effort within the state which is handled locally by the people within the separate communities involved, but assisted as fully as possible with programs and funding coordinated at the state level.

## THE SCOPE OF INDIAN EDUCATION NEEDS CALLS FOR STATEWIDE COORDINATED ASSISTANCE FOR BOTH ADULT PROGRAMS AND PUBLIC SCHOOLS.

During the course of this research, several tribal and other Indian organizational leaders expressed opinions that the state of Oklahoma needs to provide greater leadership and direction in alleviating the educational condition of the American Indian, child and adult. ~~Clearly the burden of Indian education programs does not fall exclusively on the shoulders of the state government~~.

However, it is necessary that the state educational system work as closely as possible with tribal and other Indian organizations to develop a comprehensive and effective set of educational programs which address the educational needs of the Indian adults within the state. Yet, present concerns about the leadership and direction of state Indian educational programs seem to indicate that meaningful coordination with tribal and other Indian organizational groups will call for changes in the state's commitment to the Indian educational effort.

Again, it is necessary when approaching the statewide educational needs to have the fullest public support possible. Consequently ~~a public awareness program~~ based on results of this research ~~might be effective~~ in assuring the support needed for a successful statewide ~~effort to coordinate Indian educational programs with tribal groups~~. The success of Indian education efforts not only benefit the Indian community but also the general state population who live with the Indian people on a day-to-day basis.

Cultural development. One of the most interesting implications of this research is in the area of cultural development. The A.I.E.P. survey results showed the relative success with which American Indian adults within Oklahoma read and comprehended materials from daily local newspapers. In addition to this it was discovered that ~~newspapers were the major source of information about tribal events~~ followed closely by information gained when talking with people. It is obvious that newspapers play an active part in the daily lives of adults in Indian communities within Oklahoma. In addition, as discussed above, Indian tribal groups have a need to develop contact with their bribal members and thereby maintain up-to-date accurate listings and records of their membership. These findings suggest that funding is needed to develop tribal newsletters, newspapers and other communications. In this way efforts could go beyond present concepts of cultural heritage and cultural retention to programs more appropriately termed cultural development.

In addition to providing support for cultural identity within the tribal group, ~~the newspapers presently serving the Indian people are well received because they inform the community about current events and about people within their tribal organization and the services that they are performing~~. This information is seemingly not available through other public media. With adequate funding these ~~tribal newsletters~~ and ~~newspapers could also go a long way~~ towards maintaining accurate records on actual tribal members, thus providing some additional information which

## THE DEVELOPMENT OF TRIBAL COMMUNICATION WOULD PROMOTE BOTH LITERACY AND CULTURAL DEVELOPMENT.

is vital to tribal leaders and planners as they attempt to develop and modify programs suited to the particular needs of the tribal community. Tribal newspapers also could provide the cultural support within Indian homes for the development of educational and literacy skills, support that is strongly needed to overcome many past years of inadequate educational traditions among Indian people.

Further, along with other educational programs, tribes might use newspapers as one possible educational media, one which:

(a) would further develop skills which people to a certain extent already have,

(b) reaches the largest possible number of adult Indian community members,

(c) can reach and involve people with the highest educational need with the greatest frequency and regularity,

(d) could provide some actual educational skills development as a regular part of the news feature (similar to high school equivalence programs run by newspapers in several large cities),

(e) does not involve extensive scheduled time periods and formalized classroom settings and

(f) provide straightforward practical day-to-day functional competence subject matter, working with items similar to those materials used in the Adult Indian Education Project survey.

In this way newspapers might be considered as one of several possible educational forms which at the same time provide realistic and useful day-to-day information and training (education) and also provide to the Native American community the fullest opportunity to develop its potential as a vital cultural form within contemporary American society, serving the needs of the Indian people and serving to direct its own affairs, not relying exclusively on the efforts of external state and federal agencies.

Implications for future research. As mentioned previously, the implications discussed in this conclusion chapter can only briefly touch upon the implications of the numerous results obtained during the survey of literacy and education among adult Indians in Oklahoma. The full dissemination of this research among all parties concerned, hopefully, will stimulate further research. ~~Research is needed which continues to examine functional literacy~~ particularly ~~among the American Indian community~~ in both the local tribal groups and tribal groups in other regions of the nation. As part of the analysis of the research project in its exemplary aspects, some final comments should be made about implications of this survey on future research including questions requiring further exploration and some final recommendations on research strategies.

One particular issue is the relationship between Indian culture and mainstream American culture. This issue is frequently typified by the older Indians who told A.I.E.P. staff that they ~~feel education is important for Indian young people~~, yet were heard later to say that the ~~young people who have gone away and gotten a good education no longer have the "Indian ways."~~ Put into the form of a question: "What effect does the acquisition of literacy and educational skills have upon the involvement of tribal members in their own culture?" More directly, "To what extent are present education and educational programs designed to teach Indians the ways of mainstream society instead of developing their own identity as functioning adults?" Development of communication programs within these cultural groups can ~~help insure that the tribal identity~~ is given some expression rather than being merely relegated to a position of historical significance. However, ~~the question is broader than this and needs to be more fully examined by future research~~.

The results of the A.I.E.P. survey mirror many of the findings of previous research and develop a thorough foundation of data on the literacy and education of adult Indians within Oklahoma. ~~Efforts need to be made to insure that this data is kept current.~~ Further, the Bureau of Census and other agencies responsible for providing information on the characteristics and needs of the Indian population need to revise their research procedures to more adequately reach the total Indian community. This will increase the accuracy of the information which must be used to make decisions about Indian programs and services.

~~The literacy and educational conditions of urban Indians need to be examined in more detail.~~ As discussed in Addemdum B, there are indications that urban Indians are less likely to be included on tribal membership lists. Consequently, a more thorough assessment of the literacy and education of the urban Indian will require the development of strategies to more accurately identify and locate these adults. Whether research is conducted in rural or urban regions, one strategy that was found to be effective was the development of research and research design by working in close conjunction with tribal and other Indian organizations. This strategy should be continued in future research and should include the use of tribal members as professional interviewers.

~~Further research is needed to more closely examine the apparent differences between computational, consumer and health skills of Indians and non-Indians.~~ For example, to what extent are differences due to deficiencies in the educational system and to what extent are they due to cultural or socio-economic differences which are not adequately accounted for. ~~Related to this is a question about the causes for the lower literacy and educational levels attained by students from BIA schools~~.

Finally, in many ways the social and educational conditions of Native Americans living in Oklahoma seem unique. Yet, the general functional literacy of adults in other parts of the nation has been shown to be low. Also, the severe illiteracy rates among Indian adults in the computation, consumer and health areas seem to not be strictly particular to Oklahoma.

**FURTHER RESEARCH IS NEEDED TO DETERMINE IF THE ILLITERACY RATES FOUND BY THE A.I.E.P. SURVEY IS REFLECTED AMONG THE NATIONAL INDIAN POPULATION.**

Rather, this illiteracy seems to be representative of the difficulties encountered as Indian populations attempt to gain the education and skills necessary to function in day-to-day American society. ~~Research is needed,~~ then, ~~to assess the extent to which the literacy and education needs found~~ by the Adult Indian Education Project survey in Oklahoma ~~are needs of adult Indians in other regions of the nation.~~

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## ADDENDUM A

## SUMMARY OF MAJOR FINDINGS AND IMPLICATIONS

### The Survey

The Adult Indian Education Project, working with 40 Native American interviewers and 19 tribal groups and Indian professionals, surveyed literacy and educational attainment among the Indian adult population in Oklahoma. The 15 month survey, in particular, examined "functional literacy" - those reading skills an adult must have in order to function within day-to-day American society. (This included reading such items as newspaper want ads and signs in the grocery stores.) The research was conducted by the Southwest Center for Human Relations Studies at the Universtiy of Oklahoma on a grant funded by the U. S. Office of Education, Indian Education Division and, in part, by the Office of Native American Programs. Upon completion, the A.I.E.P. survey of literacy and education was one of the most comprehensive such surveys in the history of Indian Education.

### Educational Completion

Over 51 percent of the Indian adults in Oklahoma have not completed high school and over 22 percent have not completed beyond the 8th grade.

Only 5.5 percent of Indian adults in the state have graduated from college.

Five and seven-tenths (5.7) percent of the Oklahoma Indian adult population have completed a high school equivalence program.

Thirty-seven (37) percent have attended some form of continuing, vocational/technical or adult education program.

## Illiteracy Rate

The illiteracy rate varies depending on which area of literacy is examined. However, in total, there are an estimated 36,000 Indian adults living in Oklahoma who are functionally illiterate in one or more areas. This represents 56.9 percent of the total Indian adult population. Also, only 13.9 percent of the adults surveyed were literate in all literacy areas.

The high illiteracy rates found among adult Indians in the consumer, health and computation areas were severe even in comparison to non-Indian populations. On some consumer and computation questions there were as many as 30 and 35 percent fewer Indians than non-Indians able to answer the questions correctly.

Seven and three-tenths (7.3) percent of Adult Indians could not read anything in English at all.

## Literacy Areas

Performance by Indian adults living in Oklahoma in the separate literacy areas was as follows:

> Almost 80 percent were able to read newspapers.
>
> Forty-two and eight-tenths (42.8) percent lacked the skills necessary to function as a consumer within contemporary American society. Another 30.4 percent were only marginally competent at consumer skills.
>
> Over 63 percent were not able to perform daily arithmetic and an additional 17 percent were only marginally able to do so.
>
> Sixty-two (62) percent do not fully possess the skills required to respond to the health problems which are of major concern to the American Indian community.

## Results of Specific Questions

Performance by Indian adults living in Oklahoma on specific literacy questions was as follows:

> Sixty-four and five-tenths (64.5) percent could not calculate weekly wages.
>
> Thirty-six (36) percent were unable to correctly identify what foods are protein foods.
>
> Nearly 80 percent did know what civil rights a person has when arrested.
>
> Over 50 percent could not add five two-digit numbers.
>
> Thirty-five (35) percent did not know the meaning of "equal opportunity."

## Factors Affecting or Affected by Education and Literacy

There were not noticeable differences between the literacy and educational levels of American Indian men and women.

Results of the Adult Indian Education Project indicate that there are not significant differences between the illiteracy rates of rural and urban Indians.

Those adults who attended Bureau of Indian Affairs schools are functioning at a lower level of literacy performance than those adults who attended public schools.

Both high school equivalence and continuing, vocational/technical and adult education programs have contributed to reducing the illiteracy rate among Indian adults.

Functional literacy is highly related to income level - the more functionally literate a person is, the higher his/her income is likely to be.

## Other Important Findings

According to the Adult Indian Education Project research there are at least 16,000 more American Indians in Oklahoma than previous estimates had indicated.

Almost 20 percent of the Indian adults in Oklahoma were not included in the count of American Indians by the 1970 census.

Thirty-six (36) percent of the adult Indians surveyed said they were able to speak some of their tribal language and 32 percent preferred their tribal language to English.

## Implications and Recommendations

Over 50 percent of the adult Indians in Oklahoma who have had enough schooling to be functionally literate did not actually possess the necessary functional literacy skills.

The severe illiteracy rate especially in the consumer, health and computation areas calls for immediate corrective programs.

Indian educational needs are a statewide problem that must be handled by American Indians thenselves, working with state and national assistance.

The needs of Indian adults reflect the educational needs for the public schooling of children. In particular, there is a need for a greater awareness of the problems facing Indian children. There is also a need to be sensitive to and appreciate the cultural differences influencing how American Indian children and adults function within contemporary American society.

Indian education needs to provide adequate preparation in the practical or functional skills which are useful for surviving and coping adequately day-to-day. Special emphasis is needed for functional skills in reading and comprehension of materials related to money and health matters.

Efforts need to be made to develop tribal and other Indian communication capabilities.

Data on the educational needs of adult American Indians, especially within Oklahoma, has been insufficient and must, in the future, be kept up-to-date.

# ADDENDUM B

## POPULATION ESTIMATES

The 1970 Bureau of Census Subject Report on the American Indian (1973) estimated the total Oklahoma Indian population, all ages, was 96,803. The Bureau of Indian Affairs 1972 resident Indian population report estimated the total Indian population in Oklahoma was 99,228. However, research done during this survey of literacy and education for adult Indians in the state of Oklahoma indicated that the Indian population for the state of Oklahoma was 115,800. This meant that there were over 16,000 more Indians than we had previously supposed. The social and economic implications of this funding extend far beyond the field of education. Addendum B details how this estimate was made and how it corrected inadequacies in the two previous estimates. For several reasons, this new estimate was still considered to be, itself, an underestimation, but there was no adequate way to determine the actual extent of underestimation.

A. Bureau of Census. The Bureau of Census defines an Indian as any person who is counted in the 1970 Bureau of Census and who enumerates himself on that census as an American Indian. As indicated in Section 4.21 of the report, there are fairly gross inaccuracies with this method of definition. In addition, there is considerable doubt as to whether the American Indian, at least within the state of Oklahoma, was adequately surveyed or adequately responded during the 1970 census. These factors are compounded by inaccuracies due to ethnic differences between the respondent and interviewer and by hesitancy of the American Indian community to identify with the purposes of research being conducted by persons or agencies outside of their own cummunity. All of these factors combine to indicate that the Indian state population figures estimated by the Bureau of Census is a considerably low estimate. However, if the inadequacies

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listed above were solved, the Bureau of Census survey method would provide the best approach to identifying, at least, those American Indians not actually included in any official tribal membership list.

B. Bureau of Indian Affairs. The Bureau of Indian Affairs figure is composed over a longer length of time and is composed in a way that often encourages people to insure that their names are included in the listing. However, in defining an American Indian, the Bureau of Indian Affairs includes only those persons who have one-fourth (1/4) or more Indian blood (Indian ancestry) and who can fully document that ancestry many times as far back as the 1907 Daws roll (which was itself incomplete). As a result, many persons who consider themselves American Indians are excluded from the Bureau of Indian Affairs listings. The population statistics provided by the Bureau of Indian Affairs, then, also considerably underestimate the actual number of American Indians within the state of Oklahoma.

C. The Adult Indian Education Project. As discussed in Section 2.12 of the report, the names used for the Adult Indian Education Project's survey of literacy and education of American Indians in Oklahoma were taken from a random sample of the tribal membership list. In the process of taking this sample, the actual size of the membership was computed. When appropriate, this figure was adjusted to account for the average 1.8 adult Indians within an American Indian household to arrive at a total count of the actual tribal population. The total membership for the participating tribes was 48,996.

FIGURE B-1

ESTIMATE OF THE AMERICAN INDIAN POPULATION RESIDING IN OKLAHOMA

| | |
|---|---|
| 48,996 | ACTUAL ADULT MEMBERS OF THE 19 PARTICIPATING TRIBES. |
| -4,557 | ADJUSTMENT FOR THE APPROXIMATED 9.3% OF MEMBERS ON MEMBERSHIP LISTS WHO ARE DECEASED OR HOUSEHOLDS CONTAINING NO ELIGIBLE RESPONDENT. |
| 44,439 | |
| x 1.429 | RATIO OF TOTAL STATE INDIAN POPULATION TO POPULATION OF 19 TRIBES (BUREAU OF INDIAN AFFAIRS 1972) |
| 63,490 | ESTIMATED TOTAL ADULT INDIANS WITHIN THE STATE. |
| x 1.824 | RATIO OF ADULTS TO TOTAL POPULATION INDICATED BY BUREAU OF CENSUS FIGURES (BUREAU OF CENSUS 1970 CENSUS REPORT, SUBJECT REPORT ON THE AMERICAN INDIAN, 1972) |
| 115,800 | ESTIMATED TOTAL STATE INDIAN POPULATION |

Figure B-1 provides an outline of how the adult Indian population estimate was made, based on this count of 48,996. Initially, this figure was adjusted for those persons listed on membership lists who have deceased. The 19 participating tribes comprise 70 percent of the adult Indians within the state of Oklahoma. Using this proportion, there are an estimated 63,490 American Indians who are 18 years of age and over on tribal membership lists of tribes within the state of Oklahoma. Bureau of Census figures indicate that the total Oklahoma Indian population, all ages, is approximately 1.8 times the number of persons 18 years and older. Using this Bureau of Census proportion, the Adult Indian Education Project estimates there are 115,800 American Indians, all ages, within the state of Oklahoma who are members of one of the 34 tribes within the state.

These population figures are, by all indications, more accurate than the figures used by either the Bureau of Census or the Bureau of Indian Affairs. Yet they still underestimate the actual size of the American Indian population within the state (by a percentage that cannot be computed) for principally three reasons:

(1) The figures used above exclude all American Indians within the state who are members of tribes that are located outside the state.

(2) In two particularly significant cases (Creek, Choctaw tribes), the figure used for actual size of the tribes in-state population excluded tribal members who resided outside the tribal service area, yet within the state.

(3) The figure utilized excluded a significant, though indeterminable, number of Native Americans residing within the state who for one reason or another are not officially listed on any of the tribal membership lists.

Many of these persons not listed on tribal lists are believed to reside in urban areas and to be less involved with the tribe. A comparison of A.I.E.P. figures to Bureau of Census figures seems to validate this. Census figures for the major urban areas of the state (Tulsa and Oklahoma City) indicate 29.1 percent of the state Indian population resides in these two areas. However, only 11.4 percent of the adults on tribal lists live in urban areas and only 15.6 percent even live in the counties containing the urban areas (Tulsa County and Oklahoma County).

These three facts serve to underline the statement that even the A.I.E.P. estimate of the actual size of the adult Indian population in Oklahoma is a considerable underestimate.

D. Differences. As mentioned in Section 4.21, almost 20 percent of those people surveyed indicated that they had not been counted as American Indians in the 1970 census. This is confirmed in that the Adult Indian Education Project's estimated total population frame indicates that there are at least 19.6 percent more American Indians in the state of Oklahoma than is indicated by the 1970 Bureau of Census report. This same population frame indicates that there are at least 16.7 percent more persons considered by the tribe to be American Indian than are included in BIA population estimates.